ORDER NO. AVS0003248C8

Service Manual

Combination Camera

WV-CS850/WV-CS854E

SPECIFICATIONS

Effective Pixels :	737 (H) x 575 (V)
Scanning Area :	3.57 mm (H) x 2.67 mm (V), 1/4"
Synchronization :	Internal/Line-lock / Multiplexed Vertical Drive (VD2)
Horizontal Scanning Frequency :	15.625 kHz
Vertical Scanning Frequency :	50.00 Hz
Video Output :	1.0 V[p-p] PAL composite/75 Ω
Horizontal Resolution :	More than 480 lines at centre (C/L), 570 lines at centre (B/W)
Vertical Resolution :	More than 400 lines at centre
Signal-to-noise Ratio :	50 dB (AGC OFF, weight on)
Dynamic Range :	46 dB (SUPER-D2 ON)
Minimum Illumination :	1 lx (0.1 foot-candle) C/L, 0.06 lx (0.006 foot-candle) B/W at SENS UP x 2
Zoom Speed :	Approx. 7.5 s (TELE/ WIDE) in Manual mode
Focus Speed :	Approx. 5 s (FAR/NEAR) in Manual mode
Iris :	Automatic (Open / Close is possible)/Manual
Maximum Aperture Ratio :	1 : 1.6 (WIDE) - 3.0 (TELE)
Focal Length :	3.79 - 83.4 mm
Angular Field of View :	
H :	2.6° - 52.3°
V :	2.0° - 39.9°
Electronic Shutter :	1/50 (OFF), 1/120, 1/250, 1/500, 1/1 000, 1/2 000, 1/4 000, 1/10 000 s
SENS UP :	MAX 32 times, AUTO/FIX
SUPER-D2 :	Selectable ON/OFF (SETUP MENU)
Zoom Ratio :	x 22 +Digital Zoom x10
Iris Range :	F1.6 - 22, CLOSE
Power Source :	24 V AC, 50 Hz for WV-CS854E 220 - 240 V AC, 50 Hz for WV-CS850
Power Consumption :	14 W for WV-CS854E 18 W for WV-CS850
Ambient Operating Temperature :	–10°C - +50°C (14°F - 122°F)
Dimensions :	120 (D) x 191 (H) mm [4-3/4" (D) x 7-1/2" (H)]
Weight :	Approx. 2 kg (4.4 lbs)

Panasonic

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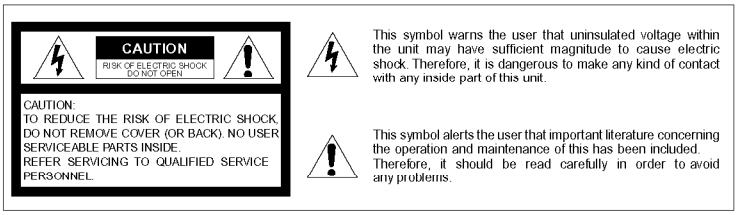
⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK). NO USER
SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE
PERSONNEL.
This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this unit.
This symbol alerts the user that important literature concerning the operation and maintenance of this has been included. Therefore, it should be read carefully in order to avoid any problems.

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are indicated by the "⚠" mark on the schematic diagram and the replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent X-radiation, shock, fire, or other hazards. Do not modify the original design without permission of manufacture.

AUTO FOCUS :	MANUAL/AUTO
AUTO MODE :	OFF/SEQ/SORT/AUTO PAN
AUTO PAN KEY :	SEQ/SORT/AUTO PAN/PATROL PLAY
Digital Flip :	ON/OFF
CAMERA ID :	Preset ID, Camera ID, Area Title : Up to 16 characters
SUPER D2 :	ON/OFF
MOTION DET :	ON/OFF
ALARM IN :	4 Inputs (ALARM IN 1 - 4)
ALARM OUT :	2 Outputs (ALARM/AUX1, B/W/AUX2)
B/W Mode :	AUTO/ON/OFF
PRIVACY ZONE :	ON/OFF, Up to 8 zones
Proportional PAN/TILT :	ON/OFF
PATROL :	LEARN/PLAY/STOP, Up to 30 seconds
Cleaning :	ON/OFF
Panning Range :	360° Endless
Panning Angle Setting :	Possible (in Auto-Pan mode)
Panning mode :	Manual/Sequential Position/Sort Position/Auto Pan
Panning Speed :	Manual : Approx. 0.1°/s - 120°/s eight steps Sequence Position : Maximum approx. 300°/s
Tilting Range :	0 - 90°
Tilting Mode :	Manual/Sequential Position/Sort Position
Tilting Speed :	Manual : Approx. 0.1°/s - 120°/s. eight steps Sequential Position : Maximum approx. 300°/s
Controls :	Pan/Tilt, Lens, 64 Preset Positions, Home Position

Weights and dimensions indicated are approximate.
Specifications are subject to change without notice.

ACCESSORIES

Decoration Cover ..... 1 pc.
Alarm In Cable ..... 1 pc.
Alarm Out Cable ..... 1 pc.
Connector for 24 V AC (only for WV-CS854E) ..... 1 pc.

OPTIONAL ACCESSORIES

Dome Cover (Smoked type) WV-CS2S
Dome Cover (Metal type) WV-CS2M
Ceiling Mount Bracket WV-Q105/WV-Q106/WV-Q107A
Wall Mount Bracket WV-Q108A

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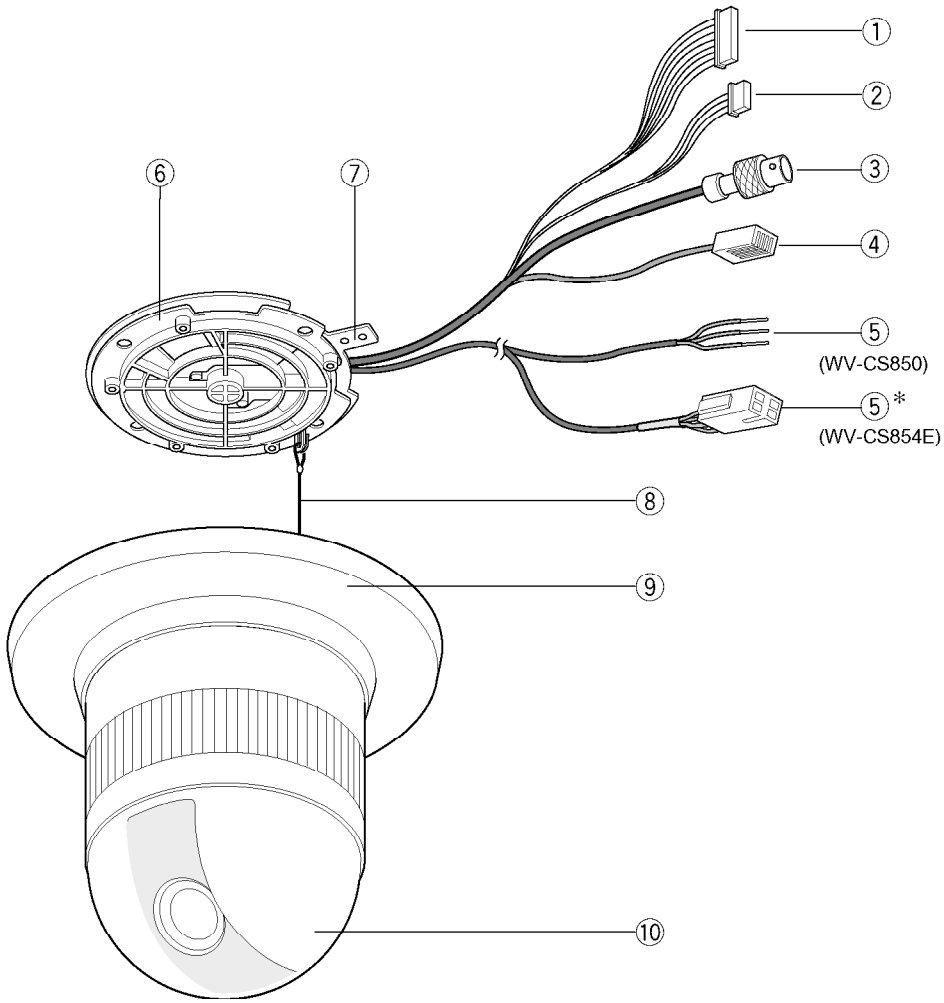
CONSTRUCTION



① **Alarm Input Connector**

② **Alarm Output Connector**

③ **Video Output Connector**

④ **Data Port**

⑤ **Power Cable for WV-CS850**

⑤* **Power Cable for WV-CS854E**

⑥ **Camera Mounting Base**

⑦ **Panning Start Point**

⑧ **Fall Prevention Wire**

⑨ **Decoration Cover**

⑩ **Dome Cover**

ADJUSTMENT PROCEDURE

1. Test Equipments Required

- The following Test Equipments are required for adjustment of the Combination Camera WV-CS850/ CS854E.
- Oscilloscope
- Frequency Counter
- Digital Voltmeter
- Vectorscope
- Waveform Monitor
- Underscanned Colour Video Monitor
- 12 V DC Power Supply Unit
- Lux Meter
- Lighting (275 footcandles (2,750 lux), Colour Temperature 3,200K)
- Personal Computer (IBM PC/AT type or equivalent)
- Standard Straight RS-232C Cable
- White Chart or White Paper
- Radiation Chart
- Colour Temperature Conversion Filters as shown in Table 1-1.

	Part No.	Description
KODAK	80B	change from 3,200 °K to 5,100 °K
KODAK	80B and 82C	change from 3,200 °K to 6,500 °K

Table 1-1

- Logarithmic Gray Scale Chart (Part No.: YWV2310RB99).
- Colour Chip Chart (Part No.: YWV2100RB98).
- Electric Variable Resistor (E.V.R.) kit (Part No.: YWV0EA1174AN) as shown in Fig. 1-1.

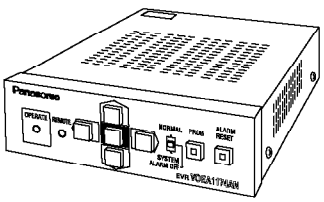


Fig. 1-1

- Extension Cable for the Power Board and the Base Unit (Part No.:V0EA1266AN) as shown in Fig. 1-2.

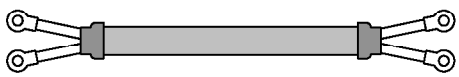


Fig. 1-2

- Extension Board Ass'y (Part No.: V0EA1265AN) as shown in Fig. 1-2.
  (Break the small Boards from the Assembly Board.)

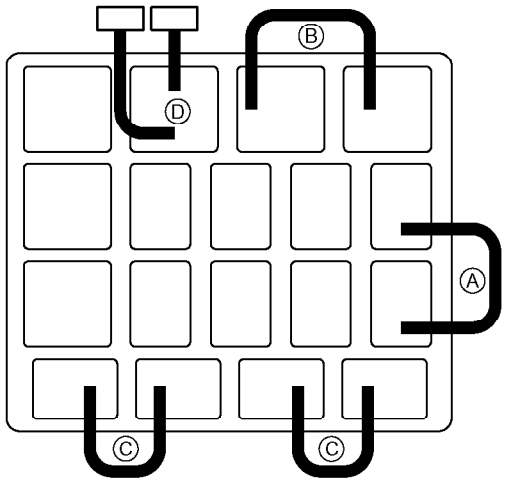


Fig. 1-2

- Extension Cable Ⓐ for CN100 of the Main Board and the Lens as shown in Fig. 1-3.

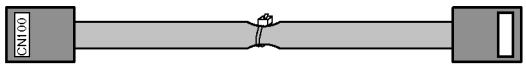


Fig. 1-3

- Extension Cable Ⓑ for CN301 of the Main and CN9 of the Servo Board as shown in Fig. 1-4.

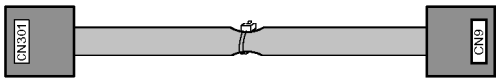


Fig. 1-4

- Extension Cable Ⓒ for CN5 of the Servo Board and the Pan Motor as shown in Fig. 1-5.

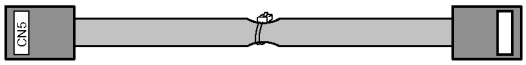


Fig. 1-5

- Extension Cable Ⓒ for CN6 of the Servo Board and the Tilt Motor as shown in Fig. 1-6.

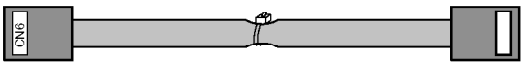


Fig. 1-6

- Extension Cable Ⓓ for CN1 and CN2 of the Communication Board and the Base Unit as shown in Fig. 1-7.

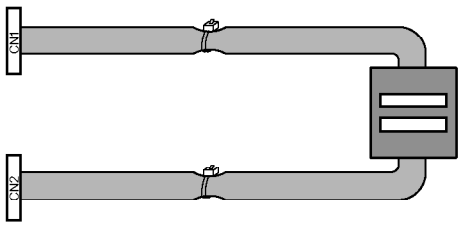


Fig. 1-7

2. Disassembling Procedure for the Adjustment

- Referring to Fig. 2-1, turn the Dome Cover to counter clockwise direction, and remove the Dome Cover.

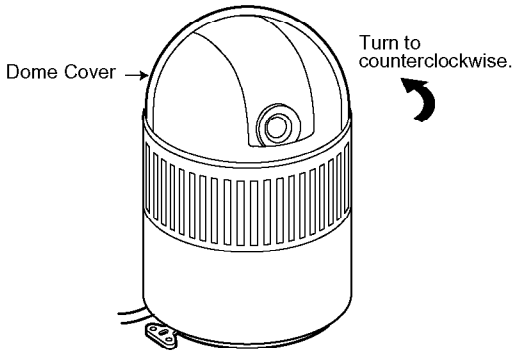


Fig. 2-1

- Referring to Fig. 2-2, remove one screw and turn the Lower Diecast Case to the counterclockwise direction and remove the Lower Diecast Case.

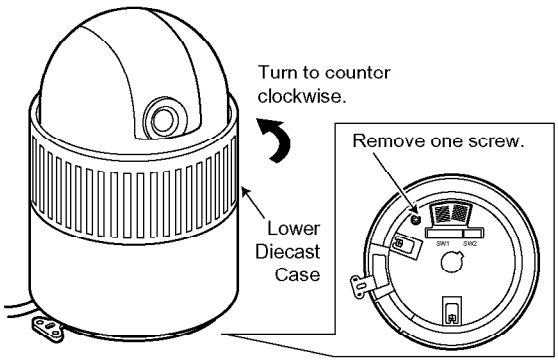


Fig. 2-2

- Referring to Fig. 2-3, disconnect one connector, and remove three screws that secure the Lower Diecast, and remove the Lower Diecast Case.

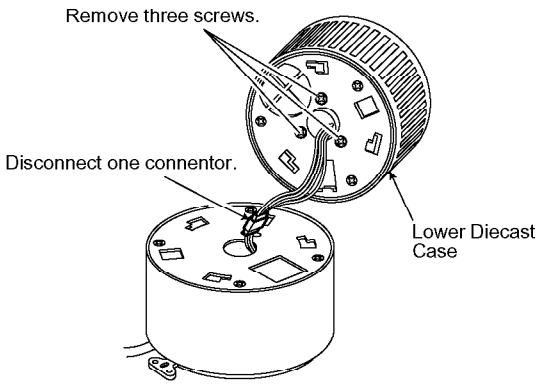


Fig. 2-3

- Referring to Fig. 2-4, remove four screws that secure the Inner Dome Cover and pull up the Inner Dome Cover.

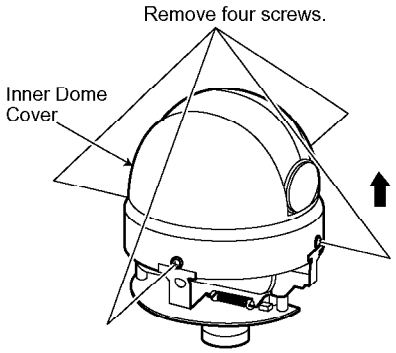


Fig. 2-4

- Referring to Fig. 2-5, loosen one screw and disconnect one connector.

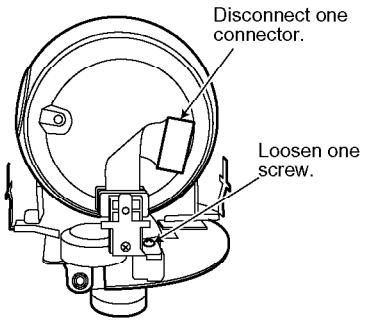


Fig. 2-5

- Referring to Fig. 2-6, remove two screws that secure the Lens Cover and remove the Lens Cover .

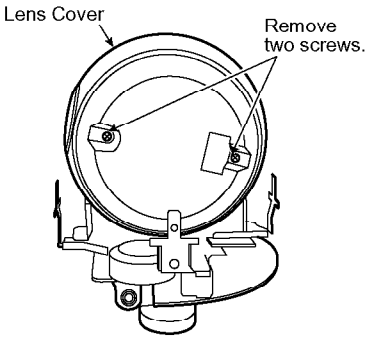


Fig. 2-6

- Referring to Fig. 2-7, remove one screw that secure the Main Board.

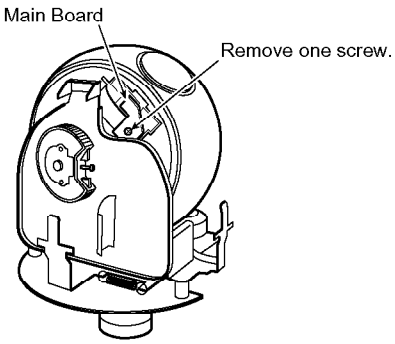


Fig. 2-7

- Referring to Fig. 2-8, remove three screws that secure the Camera Unit and remove the Camera Unit.

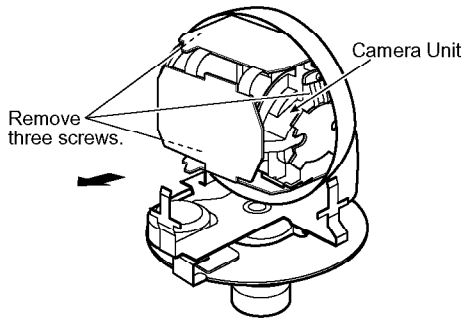


Fig. 2-8

- Referring to Fig. 2-9, remove four screws that secure the Main Board and remove the Main Board and disconnect one connector.

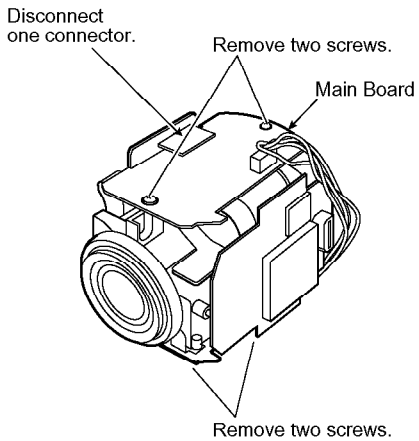


Fig. 2-9

- Referring to Fig. 2-10, remove three screws that secure the Servo Board and remove the Servo Board.

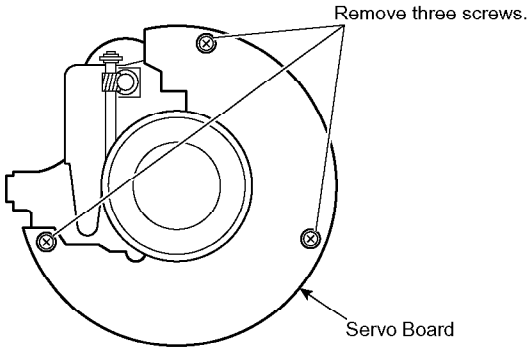


Fig. 2-10

- Referring to Fig. 2-11, remove four screws that secure the Power Bottom Plate and remove the Power Bottom Plate.

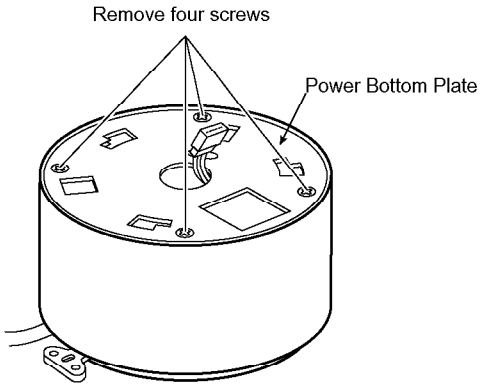


Fig. 2-11

- Referring to Fig. 2-13, remove four screws that secures the Power Board and remove the Power Board.

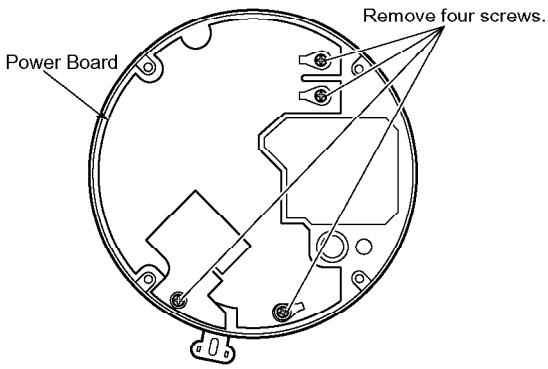


Fig. 2-13

- When adjusting the Camera, use Extension Cables as shown in Fig. 2-13.

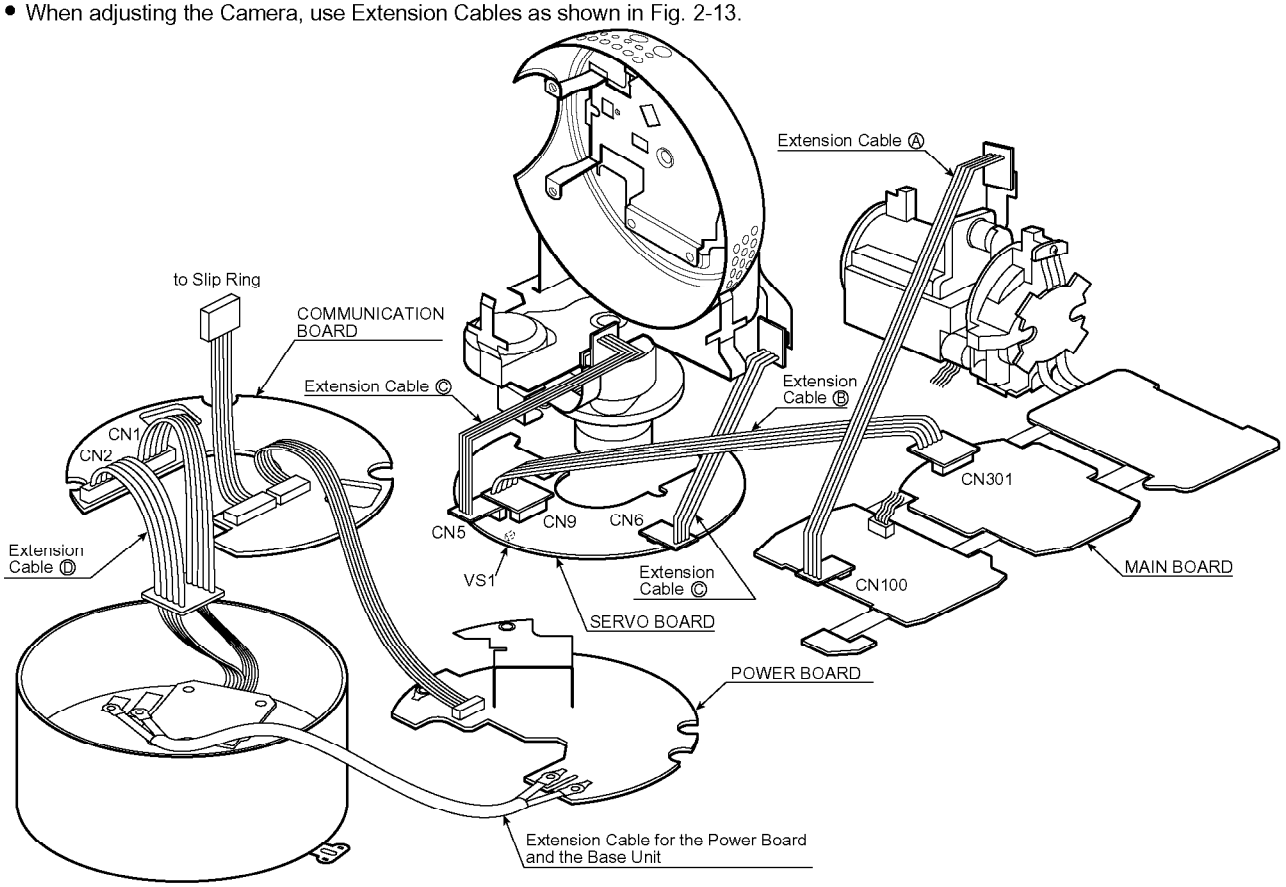


Fig. 2-14

- Connect Extension Cable A between CN100 of the Main Board and the Lens.
- Connect Extension Cable B between CN301 of the Main Board and CN9 of the Servo Board.
- Connect Extension Cable C between CN5 of the Servo Board and the Pan Motor and between CN6 of the Servo Board and the Tilt Motor.
- Connect Extension Cable D between CN1 and CN2 of the Communication Board and the Base Unit.
- Turn on the Power Switch
- Contact the magnet to VS1 on the Servo Board.

3. Connection and Setting up for Adjustment

3.1. Connection

- Fig. 3-1 shows the connecting diagram for the adjustment procedure of the WV-CS850/CS854E.

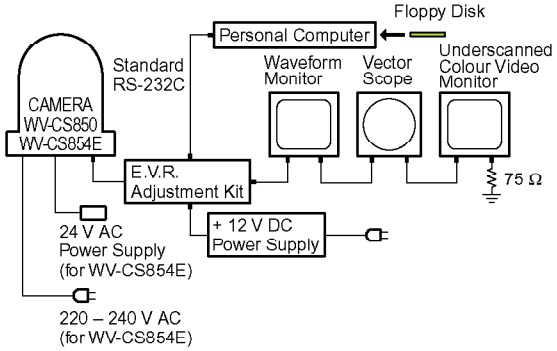


Fig. 3-1

- Connect the Underscanned Colour Video Monitor to the Video Output Connector of the E.V.R. Adjustment Kit through the Waveform Monitor and the Vectorscope using the coaxial cables.
- Connect the Video Output Connector of the WV-CS850/CS854E to the Camera Input Connector of the E.V.R. Adjustment Kit by the coaxial cable.
- Terminate the input terminal of the Underscanned Colour Video Monitor with 75Ω.
- For WV-CS854E, Connect the 24 V AC Power Supply Unit.
- Connect the +12 V DC Power Supply Unit to the E.V.R. Adjustment Kit.
- Connect the E.V.R. Adjustment Kit to IBM PC/AT type using the Standard Straight RS-232C cable.
- Connect the probe of the Digital Voltmeter, Oscilloscope or Frequency Counter at the desired Test Point in each adjustment step.

3.2. Setting Up for Remote E.V.R. Adjustment Kit

< Remote E.V.R Adjustment Kit >

- Fig. 3-2 shows the Remote E.V.R. Adjustment Kit.

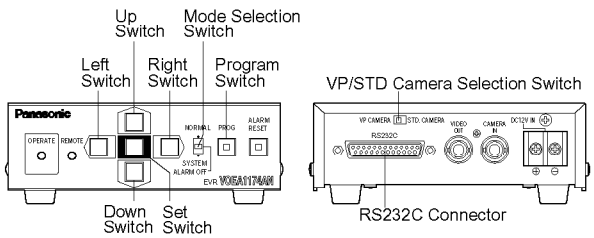


Fig. 3-2

< Switch Setting >

- Referring to Fig. 3-3, remove four screws that secure the Upper Cover and remove the Upper Cover.

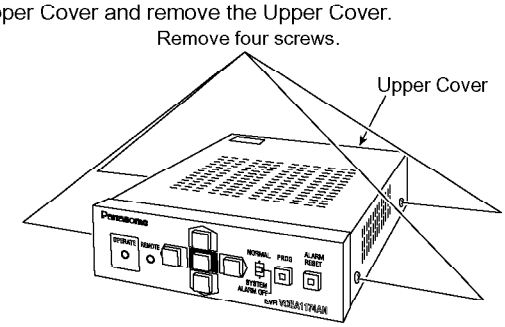


Fig. 3-3

- Set the switch SW3 on the board to the position as shown in Fig. 3-4.

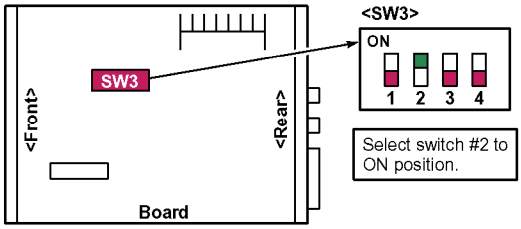


Fig. 3-4

- Set the VP/STD CAMERA selection switch on the rear panel according to the camera.
- Set to VP CAMERA position for VP Multiplexed Camera.
- Set to STD CAMERA position for Standard Camera.

< Menu Setting >

- Set the Mode Selection Switch on the Front Panel to the "ALARM OFF"(center) position.
- Keep pressing the Program Switch for 3 seconds or more until "Program Menu" is displayed on the monitor screen.
- Move the cursor to the "Controller Set Up" position by pressing the Up and Down Switch.
- Display the "Controller Set Up Menu" on the monitor by pressing the Set Switch.
- Move the cursor to the "Set Up Disable" position by pressing the Up and Down Switch.
- Change "Disable" to "Enable" by pressing the Set Switch.
- After completing the above setting, move the cursor to the Communication position by pressing the Up and Down Switch.
- Display the "Communication Menu" on the monitor by pressing the Set Switch.
- After confirming the Baud Rate is 9600, finish this menu by pressing the Program Switch twice.

< Installing E.V.R Adjustment Program >

- The Example given here is for A 2 drive computer, your procedure might vary slightly depending on the drive configuration.
- Insert floppy disk containing E.V.R. adjustment program into your floppy drive (for example,drive:A) and type **A:**
- At the prompt, type **CD IBMPC** and press **ENTER** key.
- Type **COPY CONFIG.SYS B:** and press **ENTER** key.
- Type **COPY RADJ2.EXE B:** and press **ENTER** key.
- Type **CD** and press **ENTER** key.
- Type **CD SEQ** and press **ENTER** key.
- Type **COPY CS850E.SEQ B:** and press **ENTER** key.
- Type **COPY CS850AF.SEQ B:** and press **ENTER** key.
- Type **COPY CS850TLT.SEQ B:** and press **ENTER** key.
- Type **CD** and press **ENTER** key.
- Type **CD EVR** and press **ENTER** key.
- Type **COPY CS854E.EVR B:** and press **ENTER** key.
- Type **COPY CS854AF.EVR B:** and press **ENTER** key.
- Type **COPY CS854TLT.EVR B:** and press **ENTER** key.
- After completing installation of program, you are ready to use the E.V.R. adjustment program.

3.3. Setting Up for Standard Picture

- The adjustment should be done after 10 minutes warm-up.
- Set the Logarithmic Gray Scale Chart.
- Incident light of 2,750 ± 50 lux on the Logarithmic Gray Scale Chart.
- Aim the Camera at the Logarithmic Gray Scale Chart.
- Set the Camera so that the Logarithmic Gray Scale Chart becomes full picture on the Underscanned Colour Video Monitor by the E.V.R. Adjustment Kit.
- Adjust the Lens Focus to obtain correct focal point by the E.V.R. Adjustment Kit.
- The adjustments should be done with this Standard Picture, unless otherwise specified.

4. Adjustment Procedure

■ Adjustment Procedure-1 (Camera Adjustment)

- Connect the Video Output Connector of WV-CS850/ CS854E to the Camera Input Connector of the E.V.R. Adjustment Kit.
- Connect the E.V.R. Adjustment Kit to IBM PC/AT type using the Standard Straight RS-232C cable.
- Insert new disk containing DOS Operating System and the E.V.R. Adjustment program into IBM PC/AT and turns on the Power Switch of IBM PC/AT.
- At the prompt, type **RADJ2 CS850E** and press the **ENTER** key an initial menu page as shown in Fig.4-1 will be displayed.

```
PANASONIC EVR ADJUSTMENT SYSTEM  (C)MCI Co.  CCTV PRODUCT: CS850  EEPROM: 0
**************************** MENU ********** Page (1/1) ******* PAL
  1. SC FREQUENCY                    14.2. 3200K B_GAIN
  2. LL PHASE FOR AC type (50Hz)     14.3. 3200K PHASE
  3. HI CLIP LEVEL                   15.1. 5100K R_GAIN
  4. PEDESTAL                        15.2. 5100K B_GAIN
  5. ALC DC                          16. HIGHLIGHT CHROMA CLIP
  6.1. VIDEO OUT GAIN (L)
  6.2. VIDEO OUT GAIN (H)
  7. MANUAL IRIS (A)
  8. MANUAL IRIS (B)
  9. MANUAL IRIS (C)
  10. MANUAL IRIS (D)
  11.1. BURST LEVEL R
  11.2. BURST LEVEL B
  11.3. BURST PHASE R
  11.4. BURST PHASE B
  12.1. WB 3200K MANU OFFSET R
  12.2. WB 3200K MANU OFFSET B
  13.1. WB 6500K ATW LIMIT R
  13.2. WB 6500K ATW LIMIT B
  14.1. 3200K R_GAIN

<CONTENTS>    TP7 (SC) [SYNC]     4433579+-10Hz
<INSTRUCTION> PLEASE CHOOSE MENU DATA BY ARROW-KEY
   LOAD(F1)       QUIT(F3)       SAVE(F5)
```

Fig. 4-1

- Press the **SAVE (F5)** key of the Computer, and the Computer will ask you for the file name.
- Give appropriate file name to the your file. But do not use **CS854E.EVR**.
- This saving procedure is recommended to keep the current adjustment status of the Camera.
- Press the **LOAD (F1)** key and type **CS854E.EVR** and press the **ENTER** key for presetting the adjustment of the Camera.

1. Subcarrier Frequency Adjustment

Test Point: Pin 119 or Pin 120 of IC302 (SC VCXO)
Main Board

- Select the item "1. SC Frequency" with the **ARROW** Key and press the **ENTER** key.
- Connect the Frequency Counter to Pin 119 or Pin 120 of IC302 as shown in Fig. 4-2.

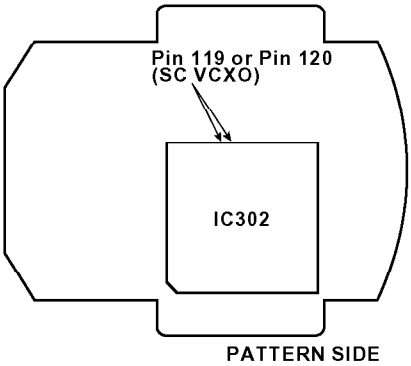


Fig. 4-2

- Adjust data with the **ARROW** keys so that the Subcarrier Frequency becomes 17.73447 MHz ± 40 Hz.
- Press the **ENTER** key for the next adjustment.

2. Line Lock Phase Adjustment

Test Point: Video Output Connector
AC Live Waveform

- Connect the CH1 of the Oscilloscope to Video Output Connector.
- Connect the CH2 of the Oscilloscope to the AC Power Line.
- Trigger the Oscilloscope at the V-rate.
- Adjust data with the **ARROW** keys so that the Line Lock Phase becomes 2 H ± 4 H as shown in Fig. 4-3.

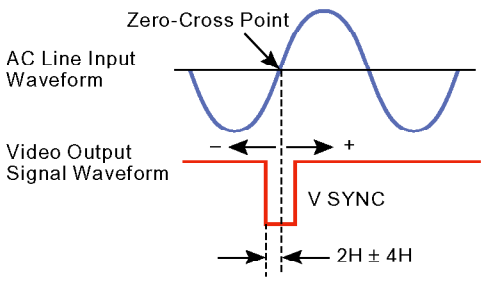


Fig. 4-3

- Press the **ENTER** key for the next adjustment.

3. High Clip Level Adjustment

Test Point: Video Output Connector

- Aim the Camera at the Logarithmic Gray Scale Chart.
- Connect the terminated Oscilloscope with 75Ω to the Video Output Connector.
- Adjust data with the **ARROW** keys so that the High Clip Level becomes 805 $^{+30}_{-0}$ mV as shown in Fig. 4-4.

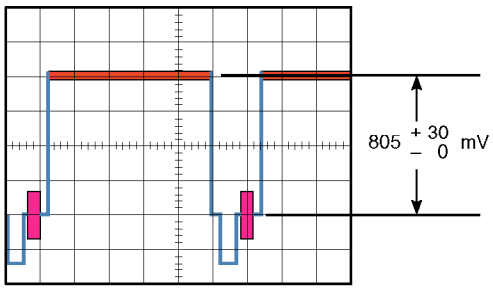


Fig. 4-4

- Press the **ENTER** key for the next adjustment.

4. Pedestal Adjustment

Test Point: Video Output Connector

- Connect the terminated Oscilloscope with 75Ω to the Video Output Connector.
- Adjust data with the **ARROW** keys so that the Pedestal level becomes 50 ± 10 mV as shown in Fig. 4-5.

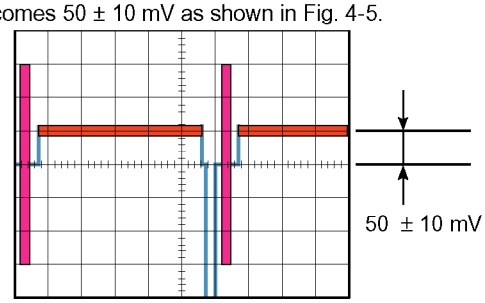


Fig. 4-5

- Press the **ENTER** key for the next adjustment.

5. ALC Level Adjustment

Test Point: RAM (808Fh)

- Aim the Camera at the Logarithmic Gray Scale Chart.
- Adjust Data with the **ARROW** Keys so that the measured Data becomes between 00 and 05 on the Computer.
- Press the **ENTER** key for the next adjustment.

6. Video Out Gain Adjustment

Test Point: Video Output Connector

- Aim the Camera at the Logarithmic Gray Scale Chart.
- Connect the terminated Oscilloscope with 75Ω to the Video Output Connector.
- Adjust data with the **ARROW** keys so that the Video Output signal level becomes 700 ± 50 mV as shown in Fig. 4-6.

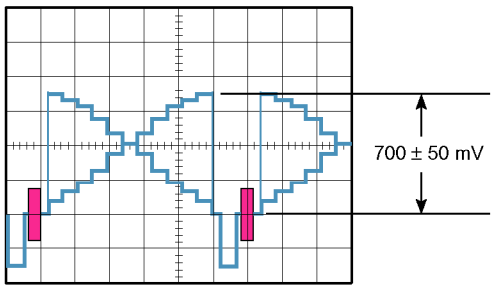


Fig. 4-6

- Press the **ENTER** key for next adjustment.
- Adjust data with the **ARROW** keys so that the Video Output signal level becomes 700 ± 50 mV as shown in Fig. 4-6.
- Press the **ENTER** key for the next adjustment.

7. Manual Iris Adjustment

- After confirming the Iris close, press the **ENTER** key.
- After confirming the Iris open, press the **ENTER** key.
- After confirming the Iris close, press the **ENTER** key.
- After confirming the Iris open, press the **ENTER** key, for the next adjustment.

8.1. Burst Level Adjustment

Test Point: Video Output Connector

- Aim the Camera at the Logarithmic Gray Scale Chart.
- Connect the terminated Oscilloscope with 75Ω to the Video Output Connector.
- Adjust data with the **ARROW** keys so that the Video Output Signal level becomes 300 ± 10 mV as shown in Fig. 4-7.

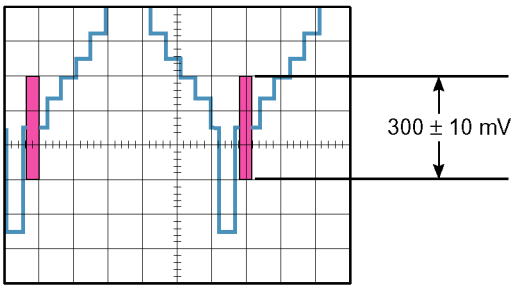


Fig. 4-7

- Press the **ENTER** key.
- Adjust data with the **ARROW** keys so that the Video Output Signal level becomes 300 ± 10 mV as shown in Fig. 4-7.
- Press the **ENTER** key for the next adjustment.

8.2. Burst Phase Adjustment

Test Point: Video Output Connector

- Aim the Camera at the Logarithmic Gray Scale Chart.
- Set the Mode Switch of the Vectorscope to “NTSC” mode.
- Adjust data with the **ARROW** keys so that the Burst Phase becomes 135 ± 1° as shown in Fig. 4-8.

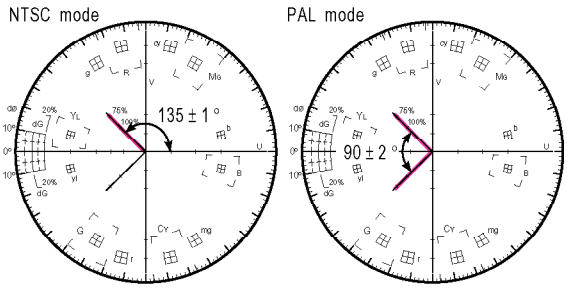


Fig. 4-8

- Set the Mode Switch of the Vectorscope to “PAL” mode.
- Adjust data with the **ARROW** keys so that the Burst Phase becomes 90 ± 2° as shown in Fig. 4-8.
- Press the **ENTER** key.
- Set the Mode Switch of the Vectorscope to “NTSC” mode.
- Adjust data with the **ARROW** keys so that the Burst Phase becomes 135 ± 1° as shown in Fig. 4-8.
- Set the Mode Switch of the Vectorscope to “PAL” mode.
- Adjust data with the **ARROW** keys so that the Burst Phase becomes 90 ± 2° as shown in Fig. 4-8.
- Repeat adjust from 8.1 to 8.2 until both Burst Level and Phase are adjusted to proper position as show in Fig. 4-7 and Fig. 4-8.
- Press the **ENTER** key for the next adjustment.

9.1. R White Balance 3200K Manual Offset Adjustment

Test Point: Video Output Connector

- Set the Gain Control of the Vectorscope to maximum.
- Aim the Camera at the White Chart or White Paper.
- Adjust data with the **ARROW** keys so that the vector positions at the center of the Vectorscope as shown in Fig. 4-9.

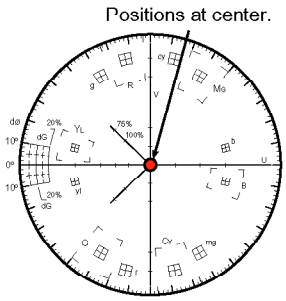


Fig. 4-9

- Press the **ENTER** key for the next adjustment.

9.2. B White Balance 3200K Manual Offset Adjustment

Test Point: Video Output Connector

- Aim the Camera at the White Chart or White Paper.
- Adjust data with the **ARROW** keys so that the vector positions at the center of the Vectorscope as shown in Fig. 4-9.
- Repeat adjust from 9.1. and 9.2. until the vector positions at the center of the Vectorscope.
- Press the **ENTER** key for the next adjustment.

10.1. R White Balance 6500K ATW Limit Adjustment

Test Point: Video Output Connector

- Aim the Camera at the White Chart or White Paper.
- Change the Colour Temperature from 3,200 °K to 6,500 °K.
- Adjust data with the **ARROW** keys so that the vector positions at shift by 10 % to the Cyan side of the Vectorscope as shown in Fig. 4-10.

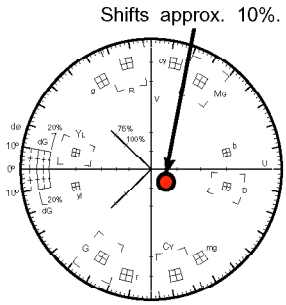


Fig. 4-10

- Press the **ENTER** key for the next adjustment.

10.2. B White Balance 6500K ATW Limit Adjustment

Test Point: Video Output Connector

- Aim the Camera at the White Chart or White Paper.
- Keep the Colour Temperature to 6,500 °K.
- Adjust data with the **ARROW** keys so that the vector positions at shift by 10 % to the Cyan side of the Vectorscope as shown in Fig. 4-10.
- Repeat adjust from 10.1. and 10.2. until the vector positions at shift by 10 % to the Cyan side of the Vectorscope.
- Press the **ENTER** key for the next adjustment.

11.1. 3200K R_Gain Adjustment

Test Point: Video Output Connector

- Aim the Camera at the Colour Chip Chart.
- Set the Gain Control of the Vectorscope to the Normal position.
- Return the Colour Temperature from 6,500 °K to 3,200 °K.
- Adjust data with the **ARROW** keys so that the Red gain becomes 220 ± 5 % (Burst level = 100%).
- Press the **ENTER** key for the next adjustment.

11.2. 3200K B_Gain Adjustment

Test Point: Video Output Connector

- Adjust data with the **ARROW** keys so that the Yellow gain becomes 100 ± 5 % (Burst level = 100%).
- Press the **ENTER** key for the next adjustment.

11.3. 3200K R_Phase Adjustment

Test Point: Video Output Connector

- Adjust data with the **ARROW** keys so that the Red Vector Phase becomes 108 ± 2 °.
- Repeat adjust from 11.1. through 11.3. until both Chrominance Phase and Gain are adjusted to proper position as shown in Fig. 4-11 and Table 4-2.

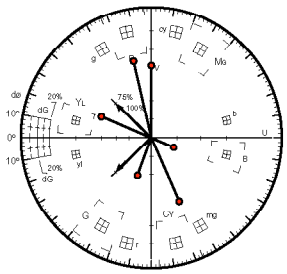


Fig. 4-11

	Red	Yellow
Phase	108 ± 2°	160 ± 5°
Gain	220 ± 5%	100 ± 5%

Table 4-2

- Press the **ENTER** key for the next adjustment.

12.1. 5100K R Gain Adjustment

Test Point: Video Output Connector

- Change the Colour Temperature from 3,200 °K to 5,100 °K.
- Adjust data with the **ARROW** keys so that the Red gain becomes 220 ± 5 % (Burst level = 100%).
- Press the **ENTER** key for the next adjustment.

12.2. 5100K B_Gain Adjustment

Test Point: Video Output Connector

- Adjust data with the **ARROW** keys so that the Yellow gain becomes 100 ± 5 % (Burst level = 100%).
  Repeat adjust from 12.1. and 12.2. until both Chrominance Phase and Gain are adjusted to proper position as shown in Fig. 4-12 and Table 4-3.

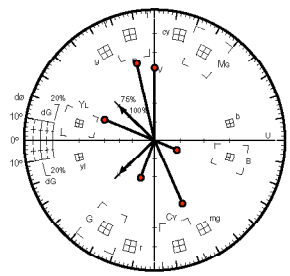


Fig. 4-12

	Red	Yellow	(Cyan)
Phase	108 ± 2°	160 ± 5°	290 ± 8°
Gain	220 ± 5%	100 ± 5%	160 ± 10%

Table 4-3

- Press the **ENTER** key for the next adjustment.

13. Highlight Chroma Clip Adjustment

Test Point: Video Output Connector

- Connect the terminated Ocsilloscope with 75 Ω to the Video Output Connector.
- Aim the Camera at the White Chart or White Paper.
- Return the Colour Temperature from 5,100 °K to 3,200 °K.
- Adjust data with the **ARROW** keys so that the false Chrominance Level becomes minimum as shown in Fig. 4-13.

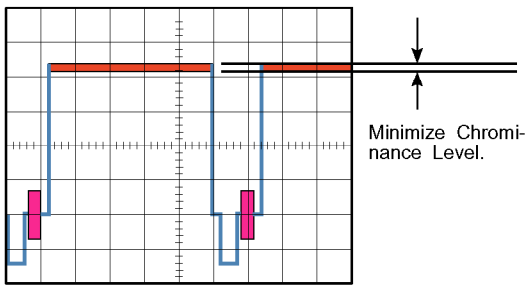


Fig. 4-13

- Press the **ENTER** key.
- After completing of the adjustment, press the **QUIT (F3)** key.
- Press the **N** key, and then press the **ENTER** key to finish of this adjustment procedure.

■ Adjustment Procedure-2 (Back Focus Adjustment)

- At the prompt, type **RADJ2 CS850AF** and press **ENTER** key, and the initial menu page as shown in Fig. 4-14 will be displayed.

```
PANASONIC REMOTE EVR ADJUSTMENT SYSTEM     CCTV PRODUCT: CS850  EEPROM: 0
************************** MENU ********* Page (1/1) ******* NTSC

  1. PAN / TILT POSITION
  2. BACK FOCUS COURSE ADJ
  3. BACK FOCUS FINE ADJ




<CONTENTS>    PAN / TILT
<INSTRUCTION> PLEASE CHOOSE MENU DATA BY ARROW-KEY
   LOAD(F1)      QUIT(F3)      SAVE(F5)
```

Fig. 4-14

- Press the **SAVE (F5)** key of the Computer and the Computer will ask you the file name.
- Give an appropriate file name to your file. But do not use **CS854AF.EVR**.
- This saving procedure is recommended to keep the current adjustment status of the Camera.
- Press the **LOAD (F1)** key and type **CS854AF.EVR** and press the **ENTER** key for presetting the adjustment of the Camera.
- Set the Radiation Chart 10 m distant from the Camera.
- Select the item "1. PAN / TILT POSITION" with the **ARROW** key and press the **ENTER** key.
- Press the **ENTER** key for setting the Pan / Tilt position.
- Aim the Camera at the Radiation Chart.

  Note: The holes on the Lens Cover for the Fan should be located at the lower side of the Camera.
- Press the **ENTER** key and, wait about 20 seconds.
- After confirming that there is no other object between the Camera and the Radiation Chart, press the **ENTER** key.
- Wait about 40 seconds until finishing the Back Focus adjustment.
- Confirm that the picture is clearly visible during zooming wide.
- If the picture is not clearly visible, press **ESC** key and, select the item "3. BACK FOCUS FINE ADJ" with the **ARROW** key, and press the **ENTER** key.
- Repeat the above adjustment until the picture becomes fine.
- After completing of the adjustment, press the **QUIT (F3)** key.
- Press the **N** key, and then press the **ENTER** key to finish of this adjustment procedure.

■ Adjustment Procedure-3 (Tilt Adjustment)

- At the prompt, type **RADJ2 CS850TLT** and press **ENTER** key, and the initial menu page as shown in Fig. 4-15 will be displayed.

```
PANASONIC REMOTE EVR ADJUSTMENT SYSTEM     CCTV PRODUCT: CS850  EEPROM: 0
************************** MENU ********* Page (1/1) ******* NTSC

  1. D-FLIP / E-ZOOM
  2. PAN / TILT POSITION-1
  3. ZOOM / FOCUS POSITION
  4. TILT ADJ
  5. CAMERA RESET
  6. PAN / TILT POSITION-1
  7. TILT RE-ADJ
  8. CAMERA RESET
  9. PAN / TILT POSITION
 10. TILT RE-ADJ
 11. CAMERA RESET



<CONTENTS>    DFlipOff, E-ZoomOff
<INSTRUCTION> PLEASE CHOOSE MENU DATA BY ARROW-KEY
   LOAD(F1)      QUIT(F3)      SAVE(F5)
```

Fig. 4-15

- Press the **SAVE (F5)** key of the Computer and the Computer will ask you the file name.
- Give an appropriate file name to your file. But do not use **CS854TLT.EVR**.
- This saving procedure is recommended to keep the current adjustment status of the Camera.
- Press the **LOAD (F1)** key and type **CS854TLT.EVR** and press the **ENTER** key for presetting the adjustment of the Camera.
- Set the Tilt Adjustment Chart supplied with the Printed Service Manual (see the next page) 2.86 m distant from the Camera as shown in Fig. 4-16.

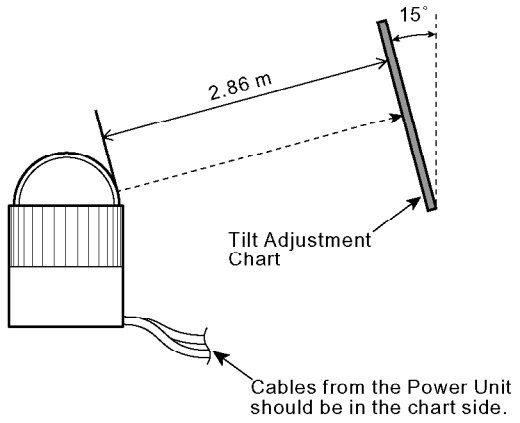


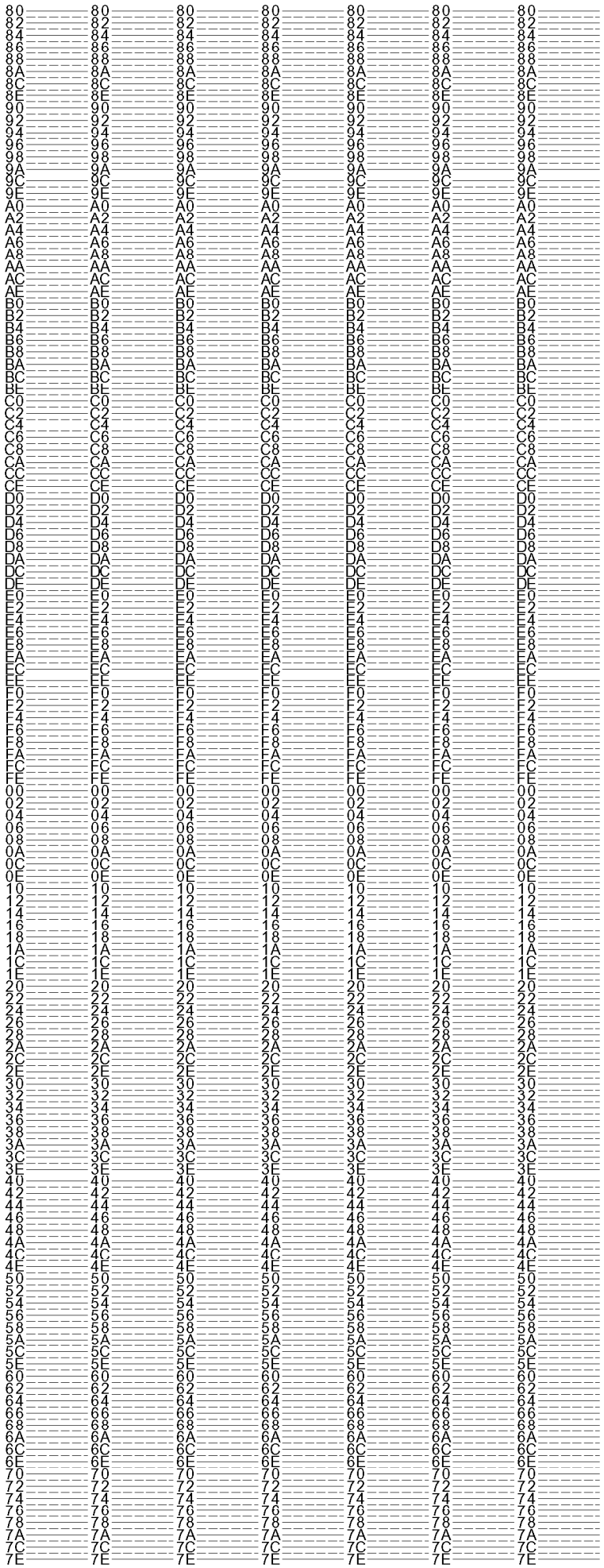
Fig. 4-16

Note: The Cables from the Power Supply Unit should be in the chart side.

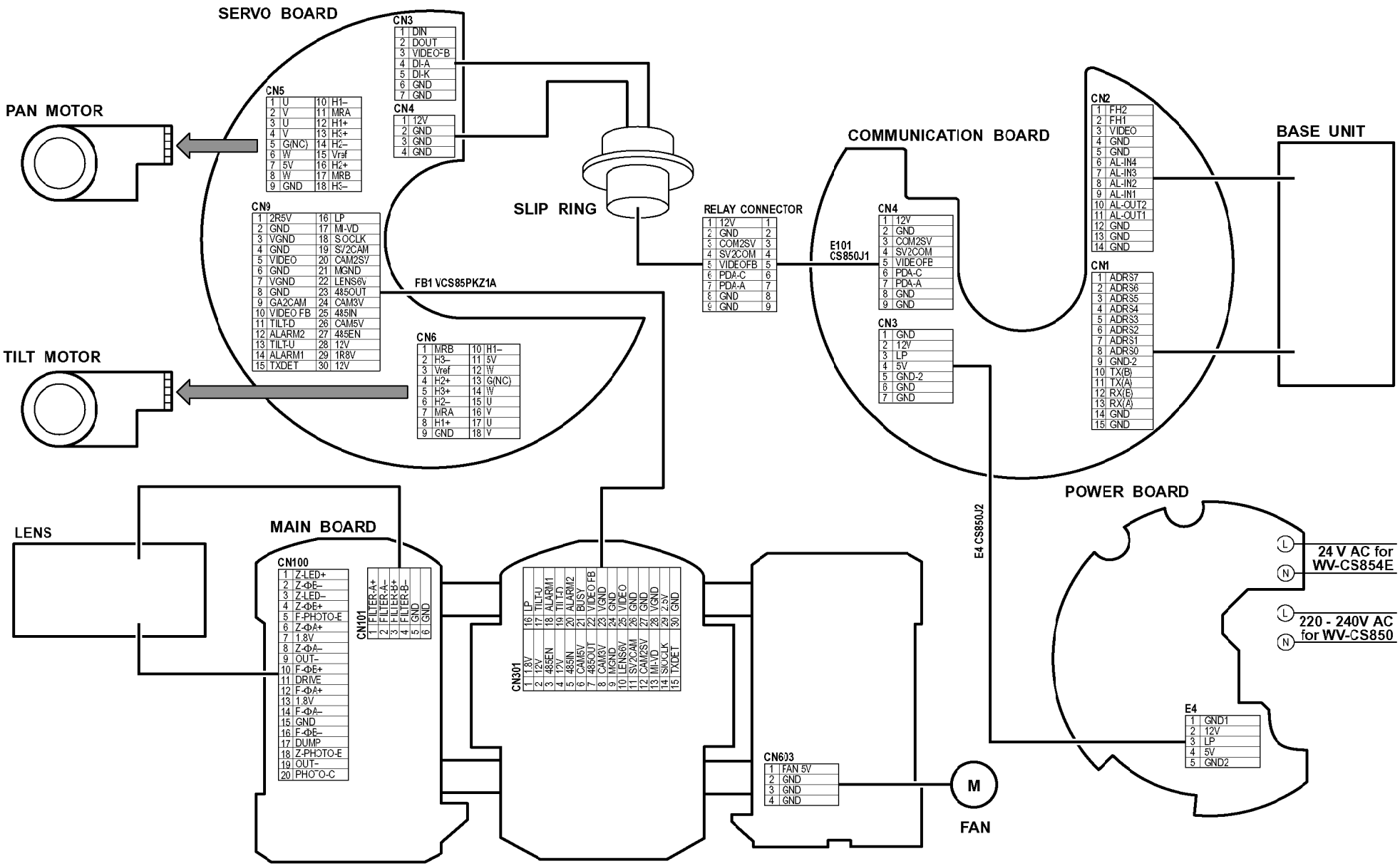
- Select the item “1. D–FLIP / E–ZOOM” with the **ARROW** key, and press the **ENTER** key.
- Press the **ENTER** key for setting the Pan / Tilt positions.
- Press the **ENTER** key for setting the ZOOM / FOCUS positions.
- Adjust the position of the Tilt Adjustment Chart so that the Hexadecimal Code on the Chart that is same as one displayed in the <DATA> area comes to the center of the color video monitor.
- Press the **ENTER** key, and wait until the Camera stops.
- If the Hexadecimal Code shifts over two scales, input that Hexadecimal Code in the <DATA> area with the **ARROW** keys and press the **ENTER** key.
- Repeat the above adjustment until the both Codes coincides.

- After completing of the adjustment, press the **QUIT (F3)** key.
- Press the **N** key, and then press the **ENTER** key to finish of this adjustment procedure.

TILT ADJUSTMENT CHART (WV-CS850 Series)

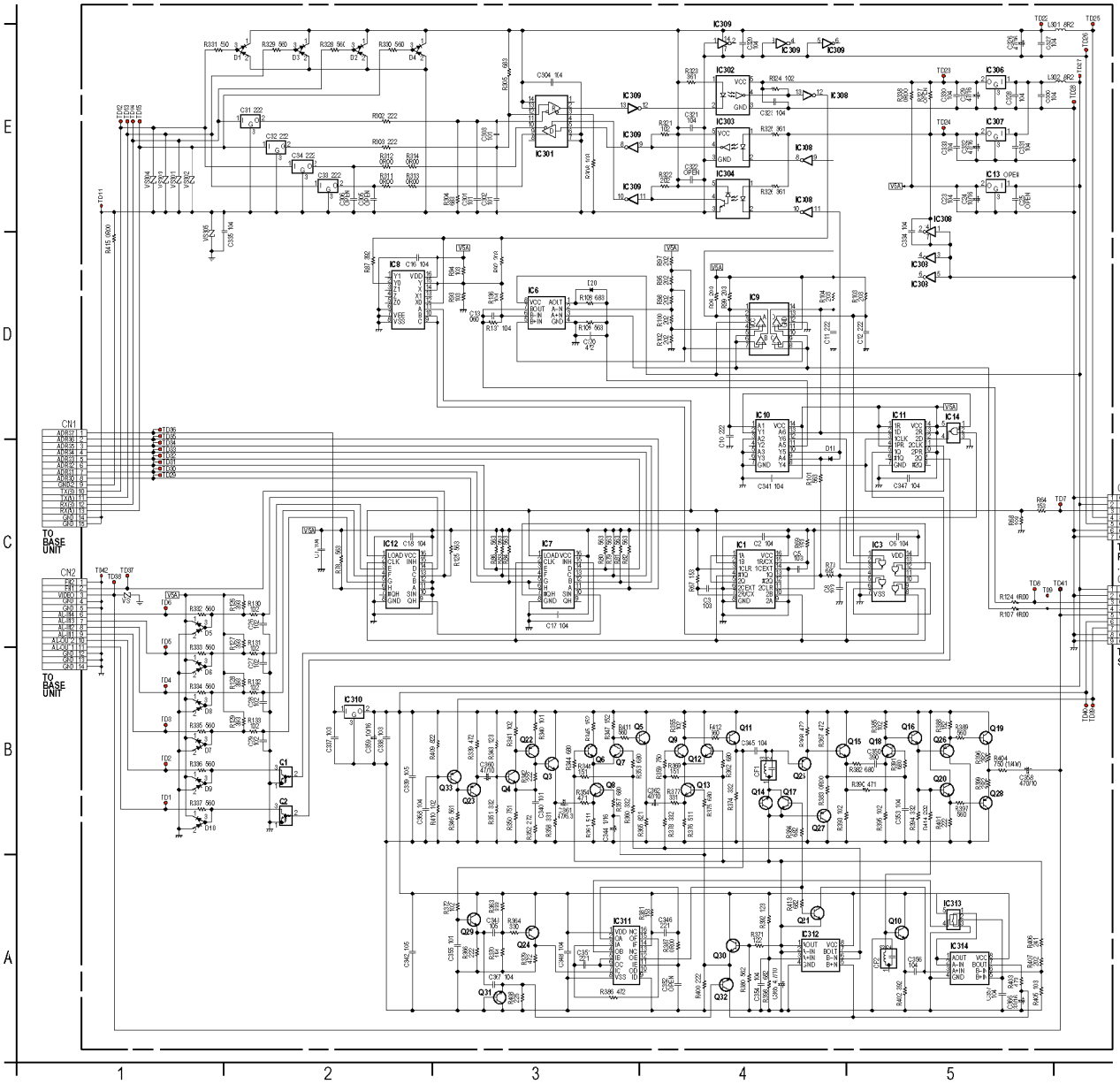


WIRING DIAGRAM



SCHEMATIC DIAGRAM OF COMMUNICATION BOARD

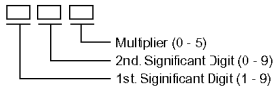
COMMUNICATION BOARD



< INDEX >
SERVO BOARD

IC1	C4	Q1	B2	D1	E2
IC3	C5	Q2	B2	D2	E2
IC6	D3	Q3	B3	D3	E2
IC7	C3	Q4	B3	D4	E2
IC8	D2	Q5	B3/B4	D5	C1
IC9	D4	Q6	B3	D6	B1
IC10	C4,D4	Q7	B3	D7	B1
IC11	C5,D5	Q8	B3	D8	B1
IC12	C2	Q9	B4	D9	B1
IC14	D5	Q10	A5	D10	B1
IC301	E3	Q11	B4	D11	C4
IC302	E4	Q12	B4	D20	D3
IC303	E4	Q13	B4		
IC304	E4	Q14	B4		
IC306	E5	Q15	B4/B5		
IC307	E5	Q16	B5		
IC308	D5,E4,E5	Q17	B4		
IC309	E3,E4	Q18	B5		
IC310	B2	Q19	B5		
IC311	A3	Q20	B5		
IC312	A4	Q21	A4		
IC313	A5	Q22	B3		
IC314	A5	Q23	B3		
		Q24	A3		
		Q25	B4		
		Q26	B5		
		Q27	B4		
		Q28	B5		
		Q29	A3		
		Q30	A4		
		Q31	A3		
		Q32	A4		
		Q33	B3		

Note: The value indicated in the schematic diagram should be read as follows:



<Example>

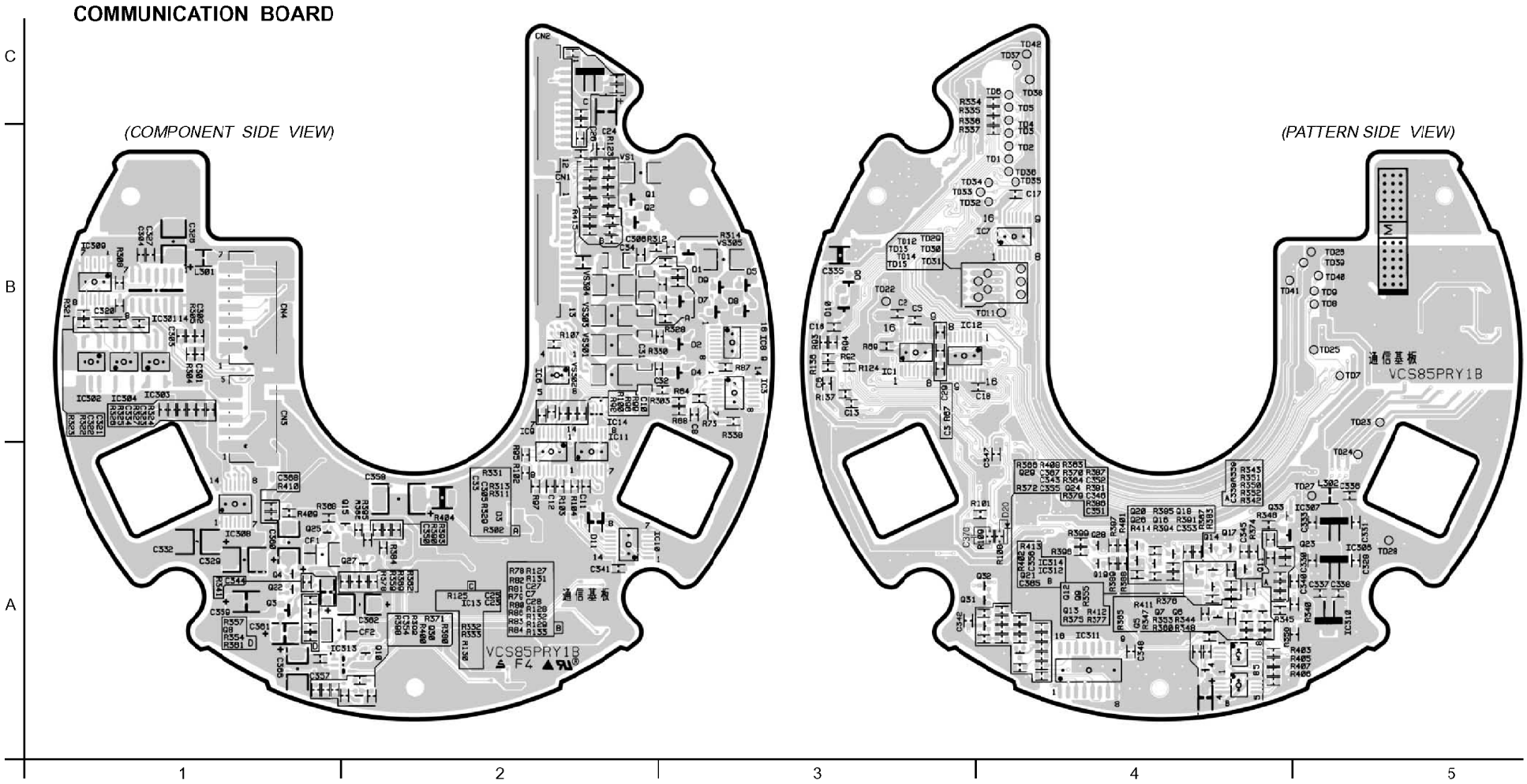
For Resistor:
- 330 ➡ 33 x 10 ^{0} = 33 Ω
- 561 ➡ 56 x 10 ^{1} = 560 Ω
- 123 ➡ 12 x 10 ^{3} = 12k Ω
- 0R00 = 0 Ω

For Capacitor
(Except Electrolytic Capacitor and Tantalum Capacitor):
- 820 ➡ 82 x 10 ^{0} = 82 pF
- 102 ➡ 10 x 10 ^{2} = 1000 pF = 0.001 μF
- 104 ➡ 10 x 10 ^{4} = 100000 pF = 0.1 μF

For Coil:
- 010 ➡ 1 x 10 ^{0} = 1 μH
- 8R2 ➡ 8.2 x 10 ^{0} = 8.2 μH
- 101 ➡ 10 x 10 ^{1} = 100 μH

CONDUCTOR VIEW OF COMMUNICATION BOARD

COMMUNICATION BOARD



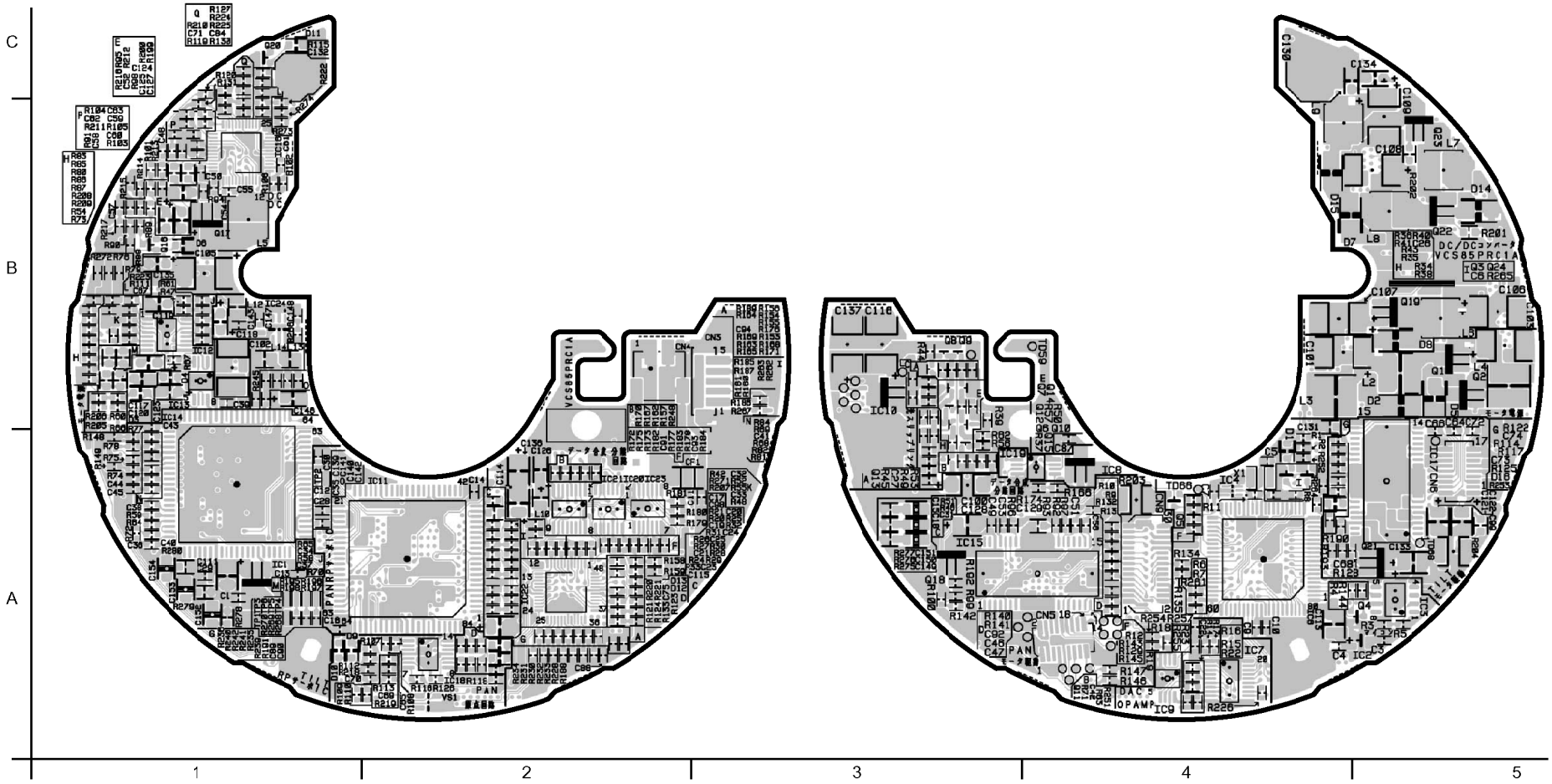
< INDEX >
COMMUNICATION BOARD

IC1	B3	IC306	A5	Q1	B2	Q15	A2	Q29	A4	D1	B3
IC3	B3	IC307	A5	Q2	B2	Q16	A4	Q30	A2	D2	B3
IC6	B2	IC308	A1	Q3	A1	Q17	A4	Q31	A4	D3	B3
IC7	B4	IC309	B1	Q4	A1	Q18	A4	Q32	A4	D4	B3
IC8	B3	IC310	A5	Q5	A4	Q19	A4	Q33	A4	D5	B3
IC9	A2	IC311	A4	Q6	A4	Q20	A4			D6	B3
IC10	A2	IC312	A4	Q7	A4	Q21	A4			D7	B3
IC11	A2	IC313	A2	Q8	A1	Q22	A1			D8	B3
IC12	B3	IC314	A4	Q9	A4	Q23	A5			D9	B3
IC14	B2			Q10	A2	Q24	A4			D10	B3
IC301	B1			Q11	A4	Q25	A1			D11	A2
IC302	B1			Q12	A4	Q26	A4			D20	A4
IC303	B1			Q13	A4	Q27	A2				
IC304	B1			Q14	A4	Q28	A4				

CONDUCTOR VIEW OF SERVO BOARD

SERVO BOARD *(COMPONENT SIDE VIEW)*

SERVO BOARD *(PATTERN SIDE VIEW)*

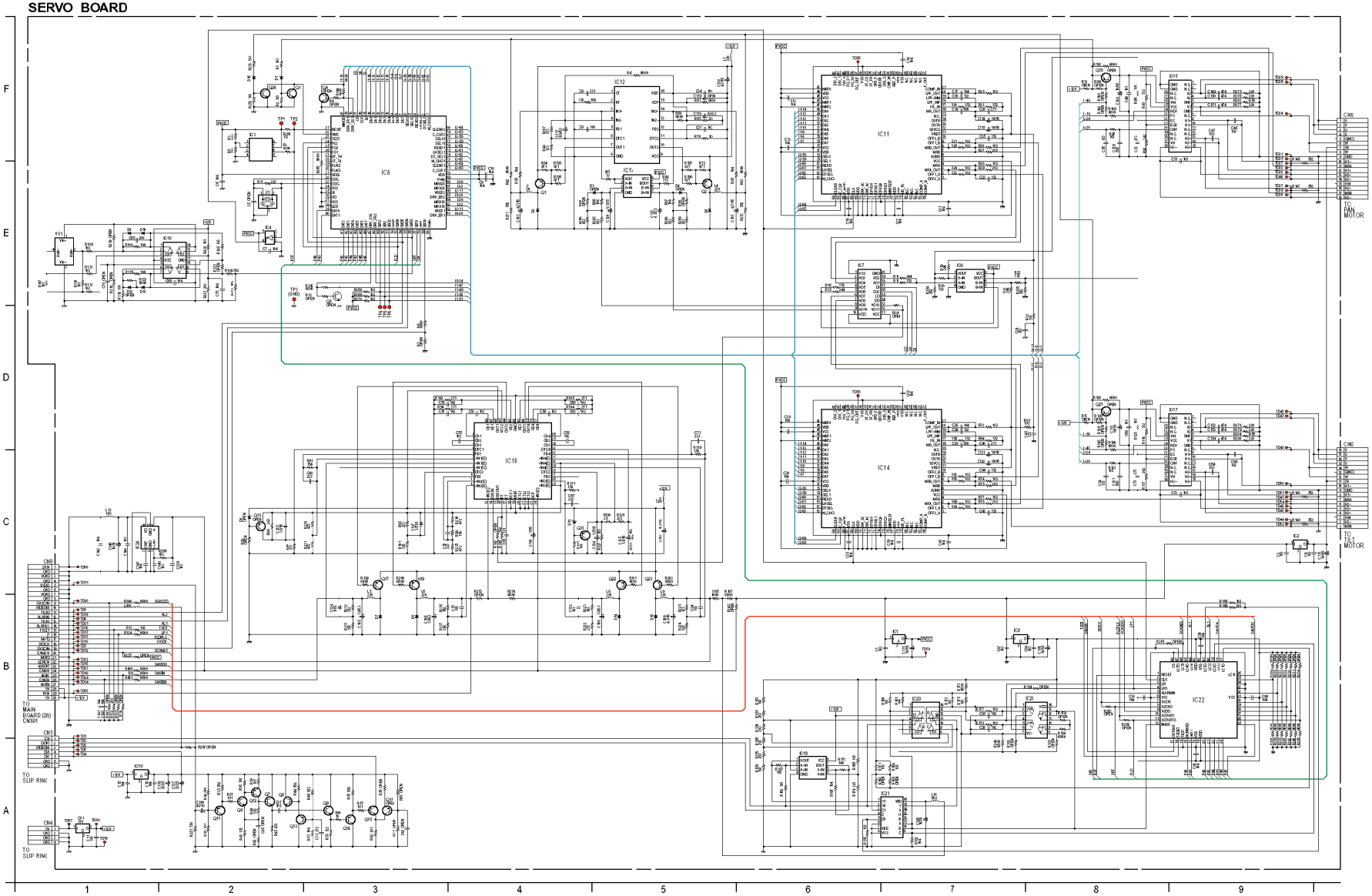


< INDEX >
SERVO BOARD

IC1	A1	IC16	B1	Q1	B5	Q20	C1	D1	A4
IC2	A5	IC17	A5	Q2	B5	Q22	B5	D2	B5
IC3	A5	IC18	A2	Q3	A4	Q23	B5	D5	B5
IC4	A4	IC19	A4	Q6	B3	Q24	A4	D7	B4
IC6	A4	IC20	A2	Q7	B3			D8	B5
IC7	A4	IC21	A2	Q8	B3			D9	A1
IC8	A4	IC22	A2	Q9	B3			D10	A1
IC9	A4	IC23	A2	Q10	B3			D11	C1
IC10	B3	IC24	B1	Q11	A3			D13	A2
IC11	A2			Q12	B3			D14	B5
IC12	B1			Q13	B3			D15	B4
IC13	B1			Q14	A3			D16	A4
IC14	A1			Q17	B1				
IC15	A4			Q19	B5				

SCHEMATIC DIAGRAM OF SERVO BOARD

SERVO BOARD



Note: The value indicated in the schematic diagram should be read as follows:

Multiplier(0 - 5)
2nd. Significant Digit (0 - 9)
1st. Significant Digit (1 - 9)

<Example>

For Resistor:
330 ➡ 33 x 10^0 = 33 Ω
561 ➡ 56 x 10^1 = 560 Ω
123 ➡ 12 x 10^3 = 12kΩ
0R05 = 0.05Ω

For Capacitor
(Except Electrolytic Capacitor and Tantalum Capacitor):
820 ➡ 82 x 10^0 = 82 pF
102 ➡ 10 x 10^2 = 1000 pF = 0.001 μF
104 ➡ 10 x 10^4 = 100000 pF = 0.1 μF

For Coil:
010 ➡ 1 x 10^0 = 1 μH
8R2 ➡ 8.2 x 10^0 = 8.2 μH
101 ➡ 10 x 10^1 = 100 μH

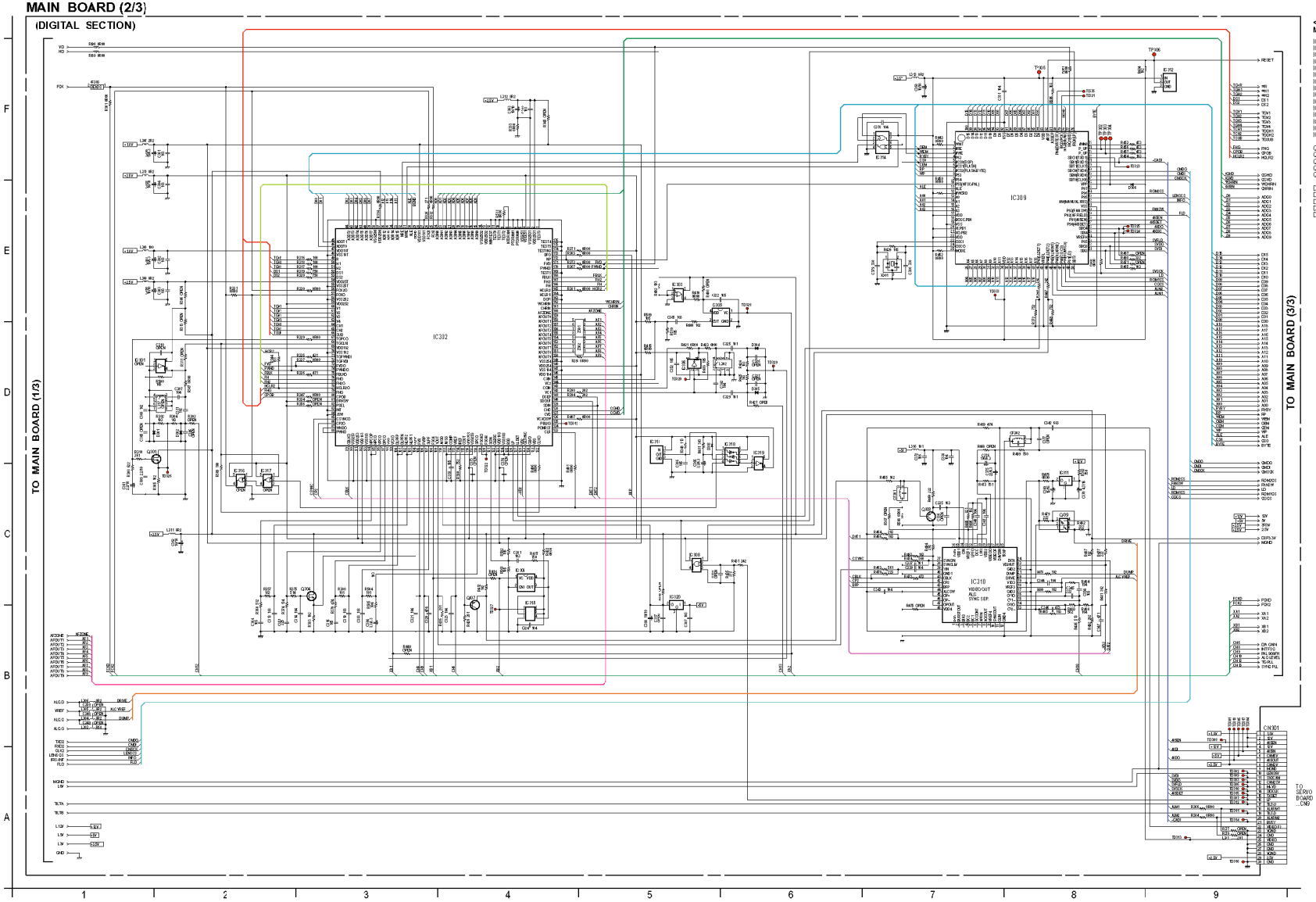
< INDEX >
SERVO BOARD

IC1	B7	IC14	G6/C7/D6/D7	Q1	E4	Q17	C3	D1	F2
IC2	C9	IC15	F9	Q2	E5	Q19	C3	D2	E4
IC3	F2	IC16	C4/D4	Q3	F2	Q20	C4	D5	E5
IC4	E2	IC17	C9/D9	Q6	A2	Q22	C5	D7	B3
IC6	E3/F3	IC18	E2	Q7	A2	Q23	C5	D8	B3
IC7	D6/D7/E6/E7	IC19	A6	Q8	A2	Q24	F2	D9	E1
IC8	B7/B6	IC20	A7/B7	Q9	A3			D10	E1
IC9	E7	IC21	A7	Q10	A3			D13	E1
IC10	A1	IC22	A9/A9/B8/B9	Q11	A2			D14	B5
IC11	E6/E7/F6/F7	IC23	A8	Q12	A2			D15	B5
IC12	F5	IC24	C1	Q13	A2			D16	F2
IC13	E5			Q14	A4				

SCHEMATIC DIAGRAM OF MAIN BOARD (2/3)

MAIN BOARD (2/3)

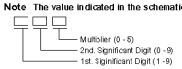
(DIGITAL SECTION)



<INDEX>
MAIN BOARD (2/3)

IC302	D3/D4/E3/E7
IC303	C4
IC305	E5/E6
IC306	D5
IC306	C5
IC309	E7/E8/F7/F8
IC310	B7/B8/C7/C8
IC311	C8
IC312	F9
IC313	C5/D5
IC314	F7
IC315	B4
IC315	C6/D6
IC319	C6
IC320	B6/C5
Q301	D1/D2
Q304	C3
Q307	B4/C4
Q308	C7
Q309	C8
D301	D1
D302	D1
D304	D6
D305	D6
D306	E5

Note The value indicated in the schematic diagram should be read as follows:



<Example>

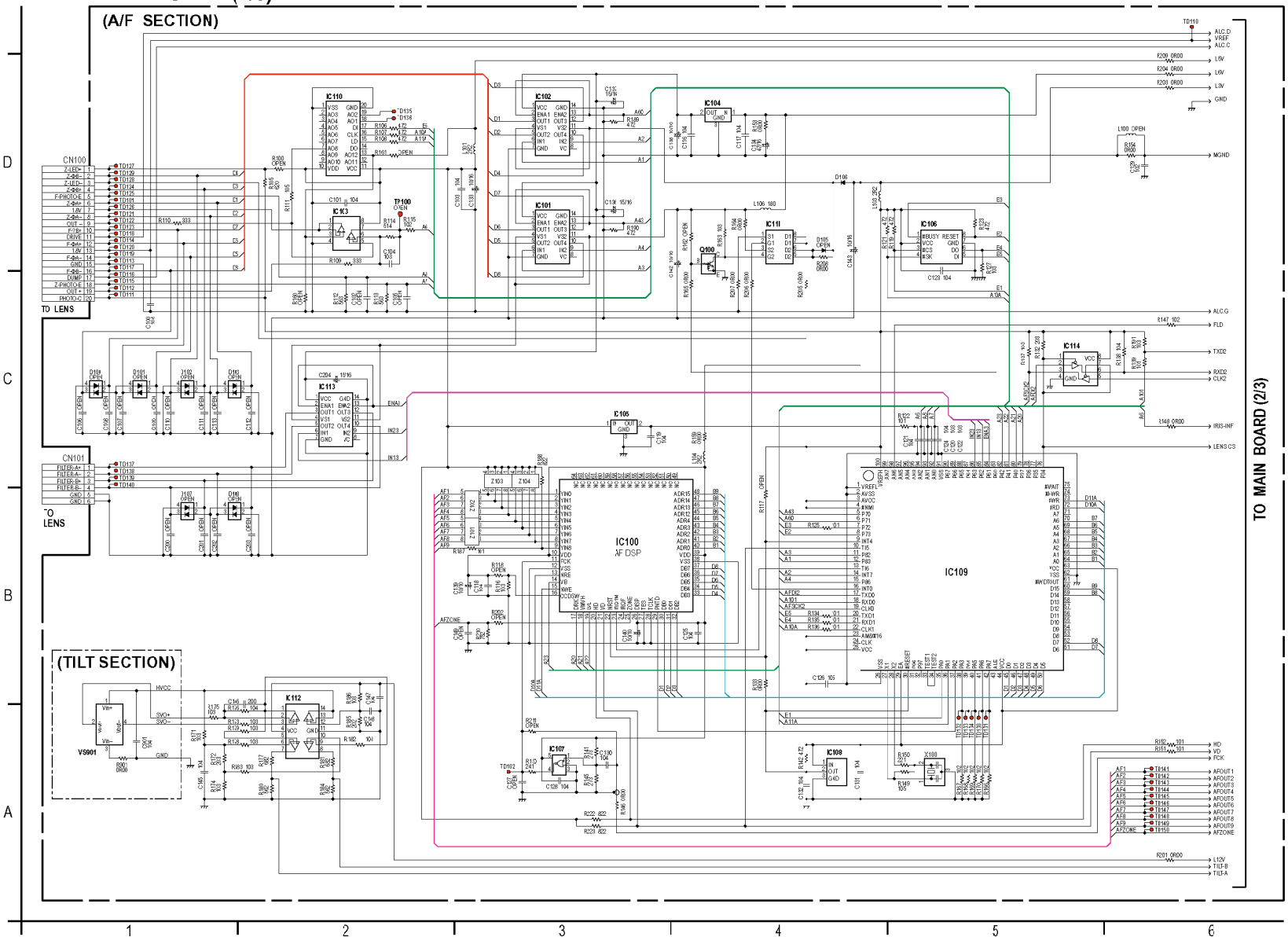
For Resistor:
330 ➡ 33 x 10^0 = 33 Ω
561 ➡ 56 x 10^1 = 560 Ω
123 ➡ 12 x 10^3 = 12k Ω
0R00 = 0 Ω

For Capacitor
(Except Electrolytic Capacitor and Tantalum Capacitor):
820 ➡ 82 x 10^0 = 82 pF
102 ➡ 10 x 10^2 = 1000 pF = 0.001 μF
104 ➡ 10 x 10^4 = 100000 pF = 0.1 μF

For Coil:
0`10 ➡ 1`x10^0 = 1 μH
8R2 ➡ 8.2x 10^0 = 8.2 μH
101 ➡ 10 x 10^1 = 100 μH

SCHEMATIC DIAGRAM OF MAIN BOARD (1/3)

MAIN BOARD (1/3)



< INDEX >
MAIN BOARD (1/3)

IC100	B3/B4/C3/C4
IC101	D3
IC102	D3
IC103	D2
IC104	D4
IC105	C3
IC106	D5
IC107	A3
IC108	A4
IC109	B4/B5/C4/C5
IC110	D2
IC111	D4
IC112	A2
IC113	C2
IC114	C5
Q100	C4/D4
D106	D4

Note: The value indicated in the schematic diagram should be read as follows:

Mutiplier :0 - 5)
2nd. Significant Digit (0 - 9)
1st. Siginificant Digit (1 - 9)

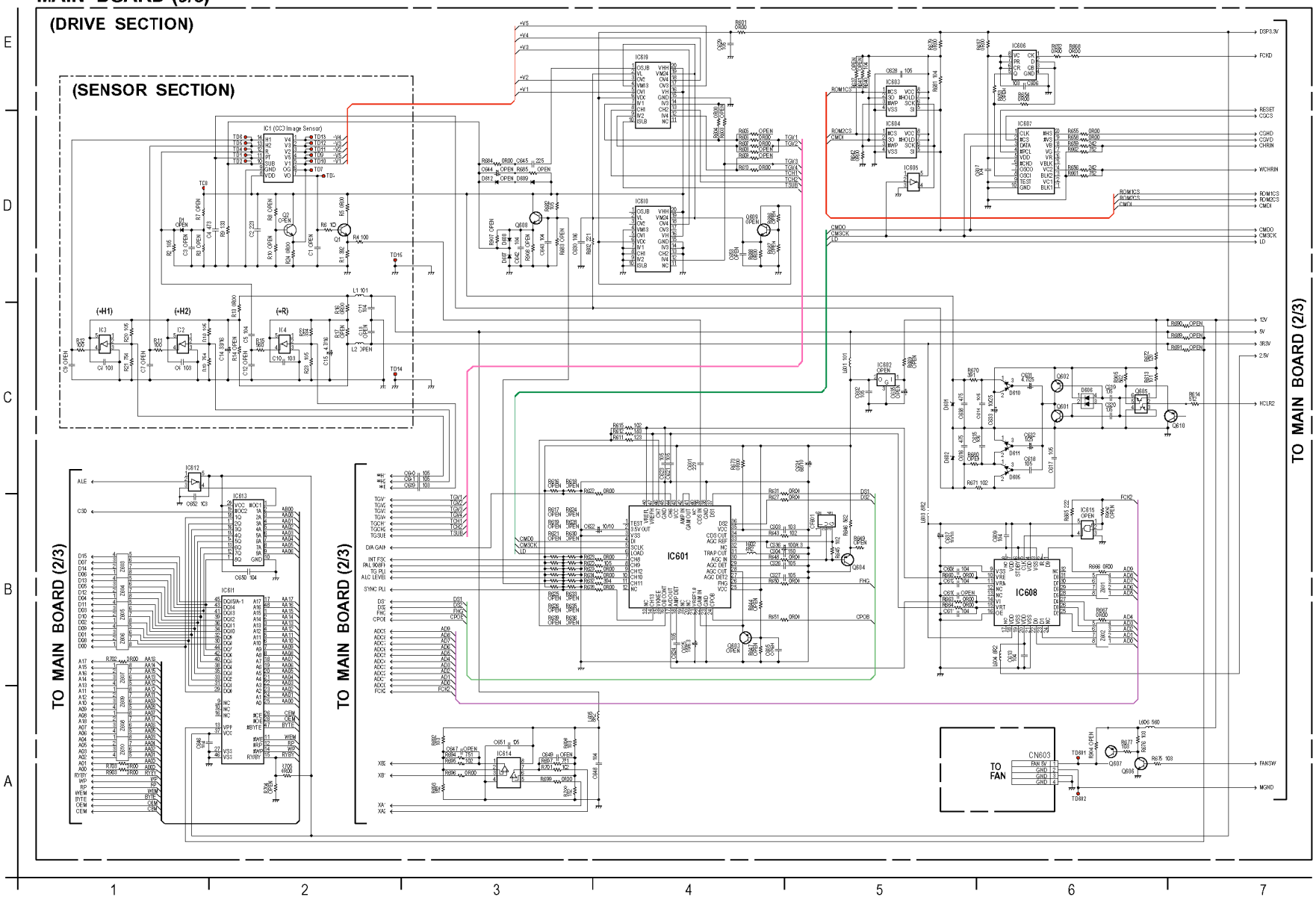
<Example>

For Resistor:
330 ➡ 33 x 10^0 = 33 Ω
561 ➡ 56 x 10^1 = 560 Ω
123 ➡ 12 x 10^3 = 12kΩ
0R0C = 0 Ω

For Capacitor
(Except Electrolytic Capacitor and Tantalum Capacitor):
820 ➡ 82 x 10^0 = 82 pF
102 ➡ 10 x 10^2 = 1000 pF = 0.001 μF
104 ➡ 10 x 10^4 = 100000 pF = 0.1 μF

For Coil:
010 ➡ 1 x 10^0 = 1 μH
8R2 ➡ 8.2 x 10^0 = 8.2 μH
101 ➡ 10 x 10^1 = 100 μH

SCHEMATIC DIAGRAM OF MAIN BOARD (3/3)



< INDEX >
MAIN BOARD (3/3)

IC2	C1	Q1	D2
IC3	C1	Q601	C6
IC4	C2	Q602	C6
IC601	B4	Q604	B5
IC603	D5/E5	Q605	C6
IC604	D5	Q606	A6
IC605	D5	Q607	A6
IC606	E6	Q608	D3
IC607	D3	Q610	C6/C7
IC608	B6		
IC609	D4/E4	D605	C6
IC610	D4	D606	C6
IC611	A2/B2	D607	D3
IC612	C1	D608	D3
IC613	B2	D609	D3
IC614	B4	D610	C6/C7

Note: The value indicated in the schematic diagram should be read as follows:

Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Significant Digit (1 - 9)

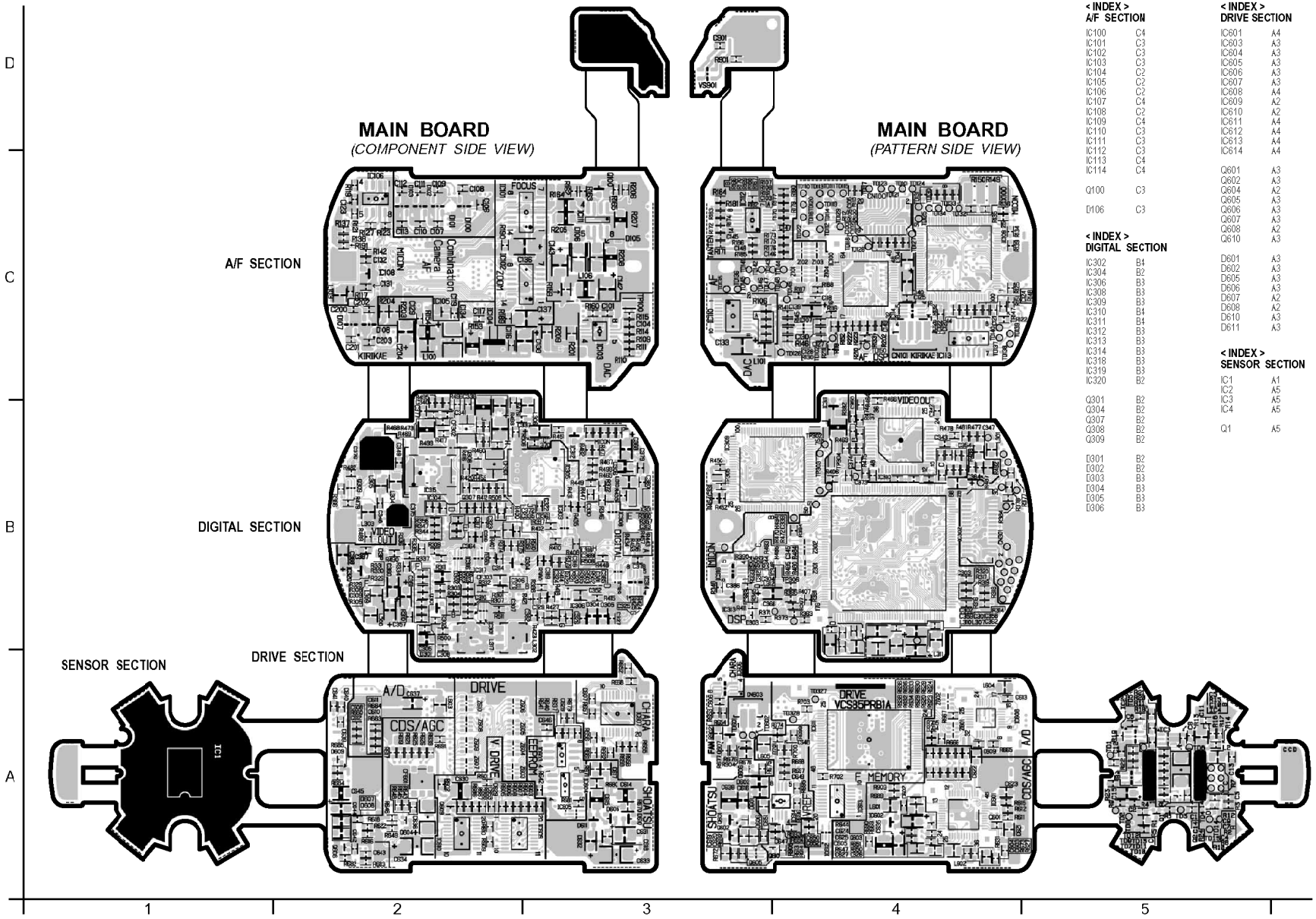
<Example>

For Resistor:
330 ➡ 33×10^0 = 33 Ω
561 ➡ 56×10^1 = 560 Ω
123 ➡ 12×10^3 = 12kΩ
3R00 = 0 Ω

For Capacitor
(Except Electrolytic Capacitor and Tantalum Capacitor)
820 ➡ 82×10^0 = 82 pF
102 ➡ 10×10^2 = 1000 pF = 0.001 μF
104 ➡ 10×10^4 = 100000 pF = 0.1 μF

For Coil:
010 ➡ 1×10^0 = 1 μH
8R2 ➡ 8.2×10^0 = 8.2 μH
101 ➡ 10×10^1 = 100 μH

CONDUCTOR VIEW OF MAIN BOARD



< INDEX >
A/F SECTION

IC100	C4
IC101	C3
IC102	C3
IC103	C3
IC104	C2
IC105	C2
IC106	C2
IC107	C4
IC108	C2
IC109	C4
IC110	C3
IC111	C3
IC112	C3
IC113	C4
IC114	C4
Q100	C3
D106	C3

< INDEX >
DIGITAL SECTION

IC302	B4
IC304	B2
IC306	B3
IC308	B3
IC309	B3
IC310	B4
IC311	B4
IC312	B3
IC313	B3
IC314	B3
IC318	B3
IC319	B3
IC320	B2
Q301	B2
Q304	B2
Q307	B2
Q308	B2
Q309	B2
D301	B2
D302	B2
D303	B3
D304	B3
D305	B3
D306	B3

< INDEX >
DRIVE SECTION

IC601	A4
IC603	A3
IC604	A3
IC605	A3
IC606	A3
IC607	A3
IC608	A4
IC609	A2
IC610	A2
IC611	A4
IC612	A4
IC613	A4
IC614	A4
Q601	A3
Q602	A3
Q604	A2
Q605	A3
Q606	A3
Q607	A3
Q608	A2
Q610	A3
D601	A3
D602	A3
D605	A3
D606	A3
D607	A2
D608	A2
D610	A3
D611	A3

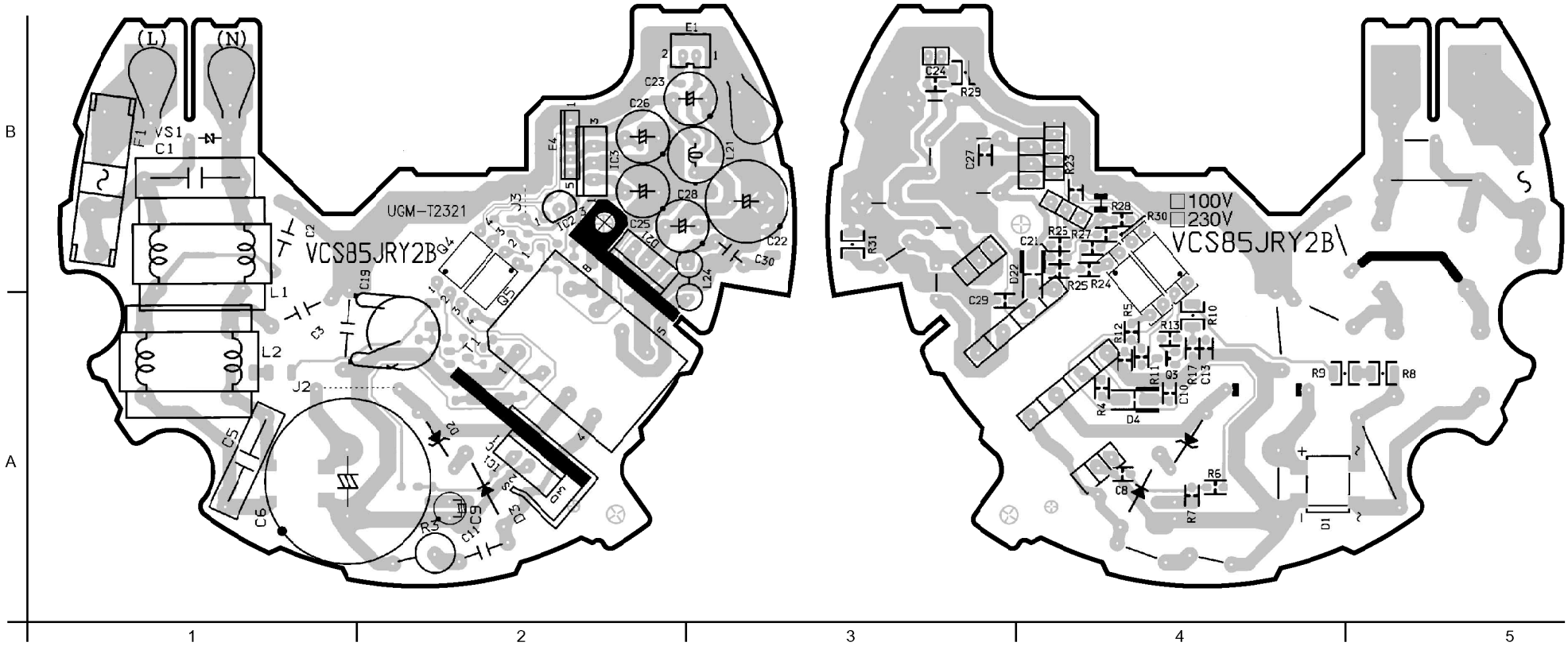
< INDEX >
SENSOR SECTION

IC1	A1
IC2	A5
IC3	A5
IC4	A5
Q1	A5

CONDUCTOR VIEW OF POWER BOARD (WV-CS850)

POWER BOARD *(COMPONENT SIDE VIEW)*

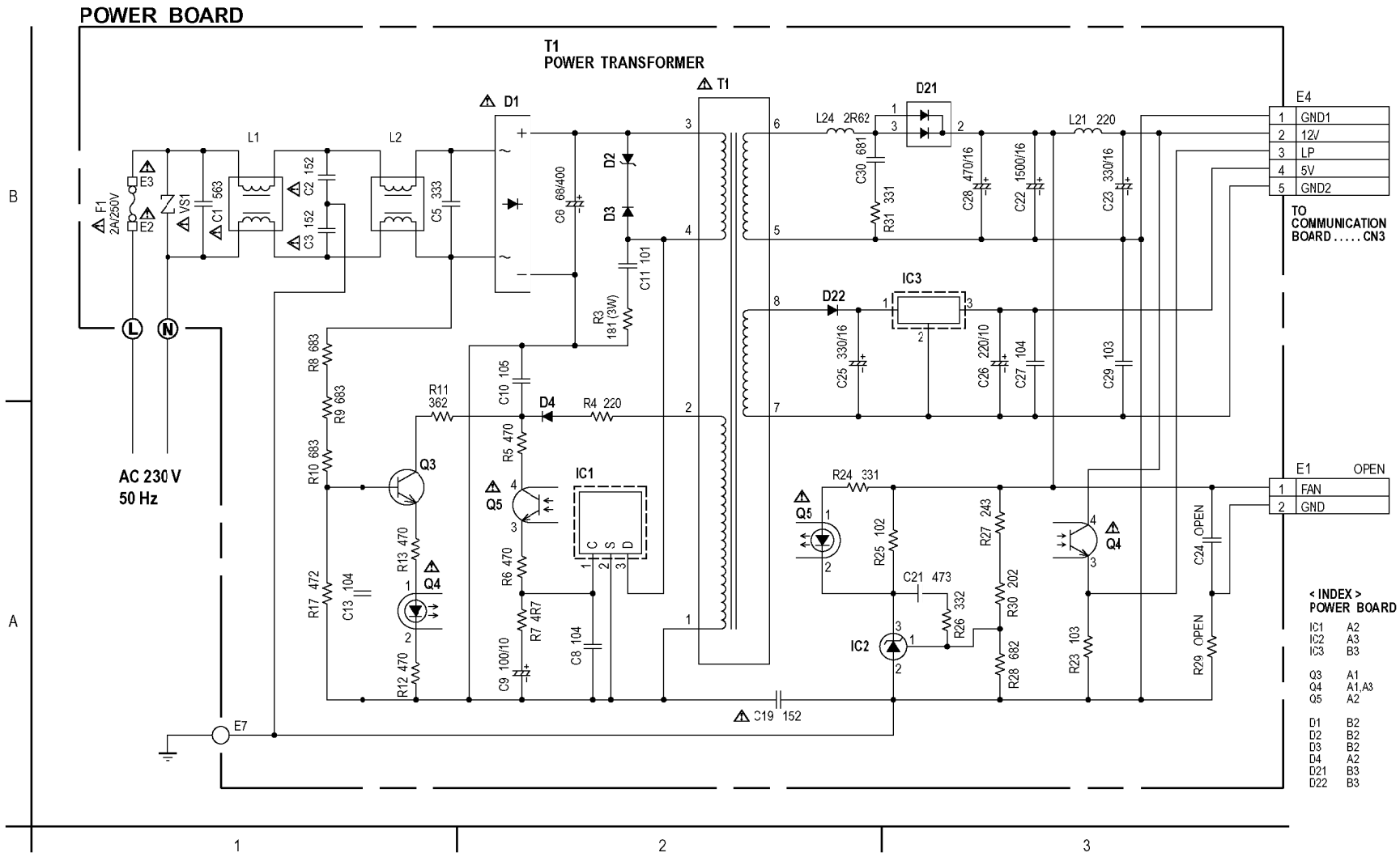
POWER BOARD *(PATTERN SIDE VIEW)*



< INDEX >
POWER BOARD

IC1	A2	D1	A1
IC2	B2	D2	A2
IC3	B2	D3	A2
		D5	A1
Q4	B2	D21	B2
Q5	A2		

SCHEMATIC DIAGRAM OF POWER BOARD (WV-CS850)



Important safety notice
Components Identified by " ⚠ " mark have special characteristics for safety.
When replacing any of these components, use only manufacturer's specified parts.

Note: The value indicated in the schematic diagram should be read as follows:

Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Siginificant Digit (1 - 9)

<Example>

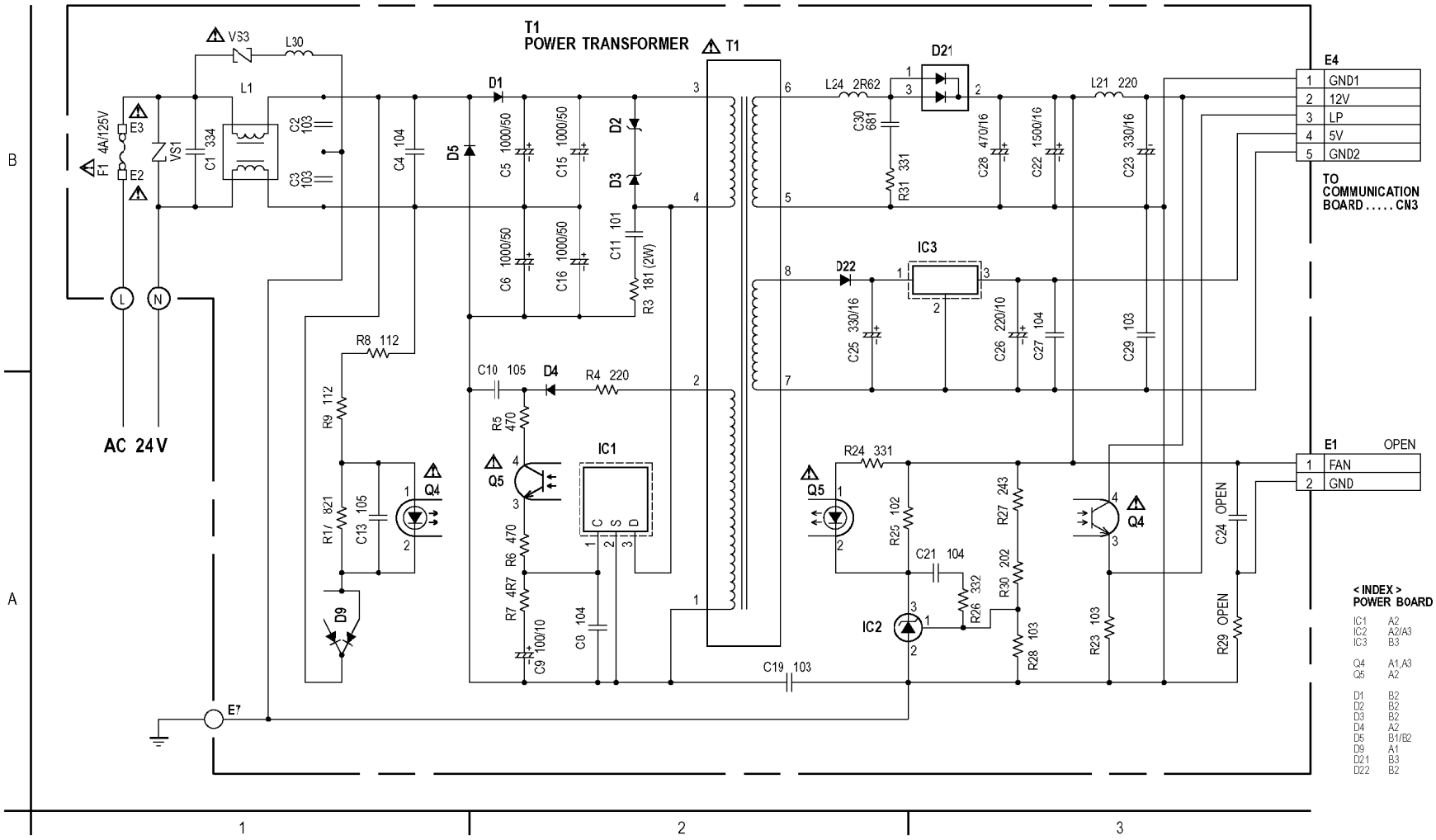
For Resistor:
330 ➡ 33 x 10^0 = 33 Ω
561 ➡ 56 x 10^1 = 560 Ω
123 ➡ 12 x 10^3 = 12k Ω
0R00 = 0 Ω

For Capacitor
(Except Electrolytic Capacitor and Tantalum Capacitor):
820 ➡ 82 x 10^0 = 82 pF
102 ➡ 10 x 10^2 = 1000 pF = 0.001 uF
10⁴ ➡ 10 x 10^4 = 100000 pF = 0.1 uF

For Coil:
010 ➡ 1 x 10^0 = 1 µH
8R2 ➡ 8.2 x 10^0 = 8.2 µH
101 ➡ 10 x 10^1 = 100 µH

SCHEMATIC DIAGRAM OF POWER BOARD (WV-CS854E)

POWER BOARD



Important safety notice
Components Identified by " ⚠ " mark have special characteristics for safety.
When replacing any of these components, use only manufacturer's specified parts.

Note: The value indicated in the schematic diagram should be read as follows:

Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Significant Digit (1 - 9)

<Example>

For Resistor:
330 ➡ 33 x 10^0 = 33 Ω
561 ➡ 56 x 10^1 = 560 Ω
123 ➡ 12 x 10^3 = 12k Ω
0R00 = 0 Ω

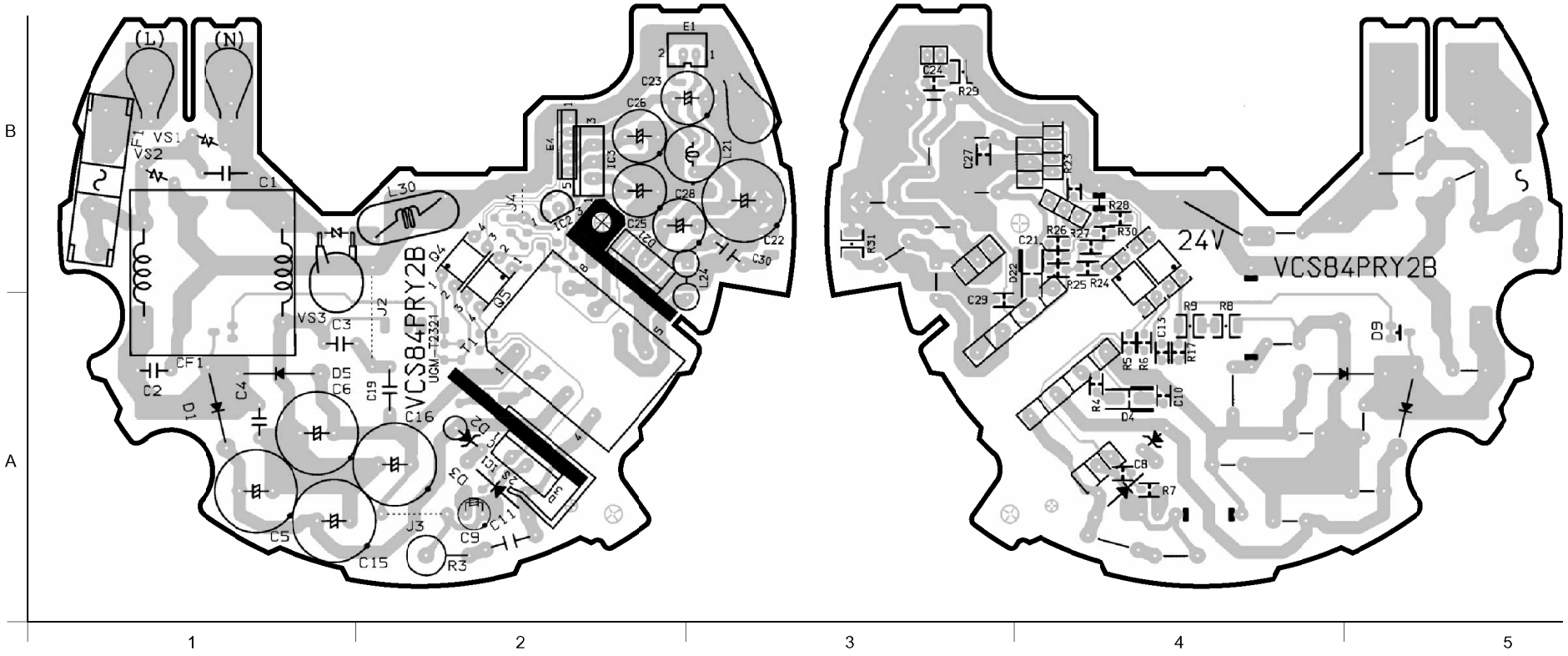
For Capacitor
(Except Electrolytic Capacitor and Tantalum Capacitor):
820 ➡ 82 x 10^0 = 82 pF
102 ➡ 10 x 10^2 = 1000 pF = 0.001 µF
104 ➡ 10 x 10^4 = 100000 pF = 0.1 µF

For Coil
010 ➡ 1 x 10^0 = 1 µH
8R2 ➡ 8.2 x 10^0 = 8.2 µH
101 ➡ 10 x 10^1 = 100 µH

CONDUCTOR VIEW OF POWER BOARD (WV-CS854E)

POWER BOARD *(COMPONENT SIDE VIEW)*

POWER BOARD *(PATTERN SIDE VIEW)*



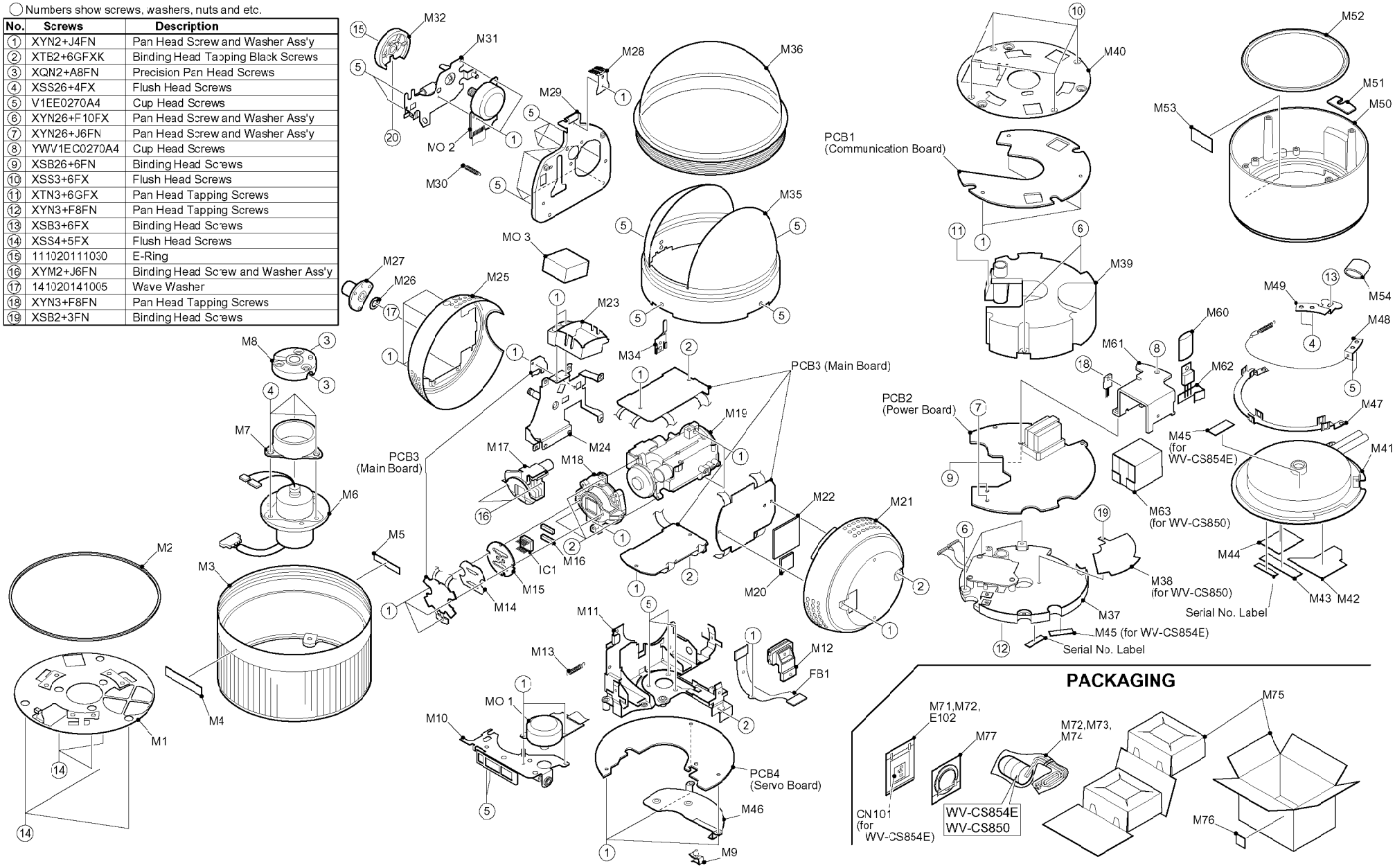
< INDEX >
POWER BOARD

IC1	A2	D1	A1
IC2	B2	D2	A2
IC3	B2	D3	A2
		D4	A4
Q4	B2	D5	A1
Q5	B2	D9	A5
		D21	B2
		D22	B4

EXPLODED VIEW

◯ Numbers show screws, washers, nuts and etc.

No.	Screws	Description
①	XYN2+J4FN	Pan Head Screw and Washer Ass'y
②	XTB2+6GFXK	Binding Head Tapping Black Screws
③	XQN2+A8FN	Precision Pan Head Screws
④	XSS26+4FX	Flush Head Screws
⑤	V1EE0270A4	Cup Head Screws
⑥	XYN26+F10FX	Pan Head Screw and Washer Ass'y
⑦	XYN26+J6FN	Pan Head Screw and Washer Ass'y
⑧	YWV1EC0270A4	Cup Head Screws
⑨	XSB26+6FN	Binding Head Screws
⑩	XSS3+6FX	Flush Head Screws
⑪	XTN3+6GFX	Pan Head Tapping Screws
⑫	XYN3+F8FN	Pan Head Tapping Screws
⑬	XSB3+6FX	Binding Head Screws
⑭	XSS4+5FX	Flush Head Screws
⑮	111020111030	E-Ring
⑯	XYM2+J6FN	Binding Head Screw and Washer Ass'y
⑰	141020141005	Wave Washer
⑱	XYN3+F8FN	Pan Head Tapping Screws
⑲	XSB2+3FN	Binding Head Screws



PACKAGING

REPLACEMENT PARTS LIST

Important Notice

1. Components identified by " ⚠ " mark have special characteristics important for safety.
   When replacing any of these components, use only manufacturer's specified parts.
2. RTL : Retention Time Limited (No longer available after discontinuing product).

REF. NO.	PART NO.	DESCRIPTION
	MISCELLANEOUS	
IC1	MN39441FT	CCD Image Sensor
FB1	VCS85PKZ1A	Flexible Board
E101	CS850J1	Internal Wire
MO 1	V0EA1269AN	Pan Motor Ass'y
MO 2	V0EA1270AN	Tilt Motor Ass'y
MO 3	L6FAGA9H0002	DC Motor
M1	V0EA1273AN	Support Plate Ass'y
M2	V2VA0508A4	Barrier
M3	V5KA2280A2	Case
M4	V7SA4109A4	Super Dynamic Label
M5	V7SD3739A4	Panasonic Label
M6	FLRSS001A	Slip Ring Ass'y
M7	V4EA0521A3	Gear
M8	V2TA1064D3	Mounting Bracket
M9	YMC05H0	Cord Clamp
M10	KU0402B	Pan Gear Ass'y
M11	V9AA2740B2	Main Frame Ass'y
M12	YWV2GA1038B3	Cord Clamp
M13	V4JA1120A4	Spring
M14	YWV2PA1103A4	Insulator
M15	YWV2TA1031A4	CCD Mounting Plate
M16	V7DA1140A4	Heat Sink
M17	EC508B	Optical Filter
M18	V2TA1063C1	Mounting Bracket
M19	CC328A	Lens
M20	V7DA1124A4	Heat Sink
M21	YWV5EA2399B2	Cover
M22	V7DA1123A4	Heat Sink
M23	V7EA0503B2	Mounting Angle for Fan
M24	V9AA2716C3	Frame Ass'y
M25	YWV5EA2398B2	Cover
M26	V2TA1066A4	Mounting Bracket
M27	V9AA2746A3	Tilt Baring Ass'y
M28	V4JA1125C3	Spring
M29	V0EA1274AN	Tilt Chassis Ass'y
M30	V4JA1124A4	Spring
M31	KU0401	Tilt Gear Ass'y
M32	V9AA2736C4	Tilt Gear Ass'y
M34	V4JA1126A4	Spring
M35	YWV5EA2400A2	Cover
M36	V9AA2735B4	Dome Cover
M37	MSS20246A	Base Unit
M38	V5EA2445A3	Shield Sheet for WV-CS850
M39	V5EA2402C2	Insulation Cover
M40	V2KA1278C1	Power Bottom Plate
M41	MSS0245XGA	Camera Mounting Base Unit for WV-CS850
	MSS0245XPA	Camera Mounting Base Unit for WV-CS854E

REF. NO.	PART NO.	DESCRIPTION
M42 ⚠	V7QA5441A4	Safety Label for WV-CS850
	V7QA5443A4	Safety Label for WV-CS854E
M43 ⚠	V7QA5439A4	Caution Label
M44 ⚠	V7QA5440A4	Main Label for WV-CS850
	V7QA5442A4	Main Label for WV-CS854E
M45 ⚠	V7MA1101A4	Safety Label for WV-CS854E
M46	V2HA2211A3	Shield Plate
M47	V4JA1127A3	Spring
M48	V5YA0514BN	Fall Prevention Wire
M49	V2KA1279A3	Chassis
M50	V5KA2279B1	Case
M51	V7DA1128A4	Heat Sink
M52	V2VA0510A4	Barrier
M53 ⚠	V7MA1102A4	Fuse Label for WV-CS850
	V7MA1100A4	Fuse Label for WV-CS854E
M54	V5EA2452A4	Cover
	COMMUNICATION BOARD	
PCB1 (RTL)	VCS85JKY1A	Printed Circuit Board Assy
IC1	C0JBAM000051	IC
IC3	C0JBAC000158	IC
IC6	YWNJM062VTE1	IC
IC7	C0JBAQ000088	IC
IC8	C0JAAS000027	IC
IC9	YWNJM2901VT1	IC
IC10	C0JBAB000247	IC
IC11	C0JBAJ000012	IC
IC12	C0JBAQ000088	IC
IC14	YWTC7SH00FUL	IC
IC301	C0ZBZ0000023	IC
IC302,303	C0ZBZ0000024	IC
IC304	B3PBZ0000003	IC
IC306,307	YW78L05UATE2	IC
IC308,309	C0JBAB000247	IC
IC310	C0CBAHC00004	IC
IC311	HD14049UBFP	IC
IC312	C0ABBA000063	IC
IC313	C0JBAS000054	IC
IC314	C0ABBA000063	IC
Q1,2	B1GBGFJJ0001	Transistor
Q3	2SD601-QR	Transistor
Q4-7	B1BBAB000016	Transistor
Q8	2SC4617TLS	Transistor

REF. NO.	PART NO.	DESCRIPTION	
Q9	B1BBAB000016	Transistor	
Q10	2SC4617TLS	Transistor	
Q11,12	B1BBAB000016	Transistor	
Q13-17	2SC4617TLS	Transistor	
Q18	B1BBAB000016	Transistor	
Q19-21	2SC4617TLS	Transistor	
Q22	2SA1774TLS	Transistor	
Q23	2SA10220BL	Transistor	
Q24	2SA1774TLS	Transistor	
Q25-28	2SA1774TLS	Transistor	
Q29-32	2SC4617TLS	Transistor	
Q33	2SA1774TLS	Transistor	
VS1	YWDSSAP030ST	ZNR	
VS301	YWDSSAP030ST	ZNR	
VS302 305	YWDSSAP030ST	ZNR	
D1-8	B0ADCJ000015	Diode	
D9,10	B0ACCJ000016	Diode	
D11,20	MA2Z72800L	Diode	
R64	ERJ3GEYJ153V	Carbon	15K ohms 1/16W
R67	ERJ3GEYJ153V	Carbon	15K ohms 1/16W
R68	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R69	ERJ3GEYJ153V	Carbon	15K ohms 1/16W
R73	ERJ3GEYJ682V	Carbon	6.8K ohms 1/16W
R78-84	ERJ3GEYJ563V	Carbon	56K ohms 1/16W
R86	ERJ3GEYJ563V	Carbon	56K ohms 1/16W
R87	ERJ3GEYJ392V	Carbon	3.9K ohms 1/16W
R92	ERJ3GEYJ203V	Carbon	20K ohms 1/16W
R93	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R94	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R95	ERJ3GEYJ202V	Carbon	2K ohms 1/16W
R96	ERJ3GEYJ203V	Carbon	20K ohms 1/16W
R97	ERJ3GEYJ202V	Carbon	2K ohms 1/16W
R98	ERJ3GEYJ202V	Carbon	2K ohms 1/16W
R99	ERJ3GEYJ203V	Carbon	20K ohms 1/16W
R100	ERJ3GEYJ202V	Carbon	2K ohms 1/16W
R101	ERJ3GEYJ563V	Carbon	56K ohms 1/16W
R102	ERJ3GEYJ202V	Carbon	2K ohms 1/16W
R103	ERJ3GEYJ203V	Carbon	20K ohms 1/16W
R104	ERJ3GEYJ203V	Carbon	20K ohms 1/16W
R107	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R108	ERJ3GEYJ683V	Carbon	68K ohms 1/16W
R109	ERJ3GEYJ563V	Carbon	56K ohms 1/16W
R124	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R125	ERJ3GEYJ563V	Carbon	56K ohms 1/16W
R126-129	ERJ3GEYJ393V	Carbon	39K ohms 1/16W
R130-133	ERJ3GEYJ102V	Carbon	1K ohms 1/16W
R136,137	ERJ3GEYJ104V	Carbon	100K ohms 1/16W
R302,303	ERJ3GEYJ222V	Carbon	2.2K ohms 1/16W
R304,305	ERJ3GEYJ683V	Carbon	68K ohms 1/16W
R308	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R311-314	ERJ3GEY0R00	Carbon	0 ohm 1/16W
R321	ERJ3GEYJ102V	Carbon	1K ohms 1/16W
R322	ERJ3GEYJ202V	Carbon	2K ohms 1/16W
R323	ERJ3GEYJ361V	Carbon	360 ohms 1/16W
R324	ERJ3GEYJ102V	Carbon	1K ohms 1/16W

REF. NO.	PART NO.	DESCRIPTION	
R325,326	ERJ3GEYJ361V	Carbon	360 ohms 1/16W
R328-337	ERJ3GEYJ560V	Carbon	56 ohms 1/16W
R338	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R339	ERJ3GEYJ472V	Carbon	4.7K ohms 1/16W
R340	ERJ3RHD101V	Metal	100 ohms 1/16W
R341	ERJ3RHD102V	Metal	1K ohms 1/16W
R342	ERJ3RHD222V	Metal	2.2K ohms 1/16W
R343	ERJ3GEYJ123V	Carbon	12K ohms 1/16W
R344	ERJ3GEYJ680V	Carbon	68 ohms 1/16W
R345	ERJ3GEYJ152V	Carbon	1.5K ohms 1/16W
R346	ERJ3GEYJ561V	Carbon	560 ohms 1/16W
R347	ERJ3RHD152V	Metal	1.5K ohms 1/16W
R348	ERJ3GEYJ151V	Carbon	150 ohms 1/16W
R350	ERJ3RHD751V	Metal	750 ohms 1/16W
R351	ERJ3GEYJ332V	Carbon	3.3K ohms 1/16W
R352	ERJ3GEYJ272V	Carbon	2.7K ohms 1/16W
R353	ERJ3GEYJ680V	Carbon	68 ohms 1/16W
R354	ERJ3RHD471V	Metal	470 ohms 1/16W
R355	ERJ3RHD102V	Metal	1K ohms 1/16W
R357	ERJ3GEYJ680V	Carbon	68 ohms 1/16W
R358	ERJ3GEYJ331V	Carbon	330 ohms 1/16W
R359	ERJ3GEYJ750V	Carbon	75 ohms 1/16W
R360	ERJ3GEYJ332V	Carbon	3.3K ohms 1/16W
R361	ERJ3GEYJ511V	Carbon	510 ohms 1/16W
R362	ERJ3GEYJ680V	Carbon	68 ohms 1/16W
R363	ERJ3GEYJ333V	Carbon	33K ohms 1/16W
R364	ERJ3GEYJ330V	Carbon	33 ohms 1/16W
R365	ERJ3GEYJ821V	Carbon	820 ohms 1/16W
R366	ERJ3GEYJ222V	Carbon	2.2K ohms 1/16W
R367,368	ERJ3GEYJ472V	Carbon	4.7K ohms 1/16W
R369	ERJ3GEYJ151V	Carbon	150 ohms 1/16W
R370	ERJ3GEYJ154V	Carbon	150K ohms 1/16W
R371	ERJ3GEYJ122V	Carbon	1.2K ohms 1/16W
R372	ERJ3GEYJ102V	Carbon	1K ohms 1/16W
R374	ERJ3GEYJ332V	Carbon	3.3K ohms 1/16W
R375	ERJ3GEYJ680V	Carbon	68 ohms 1/16W
R376	ERJ3GEYJ511V	Carbon	510 ohms 1/16W
R377	ERJ3RHD331V	Metal	330 ohms 1/16W
R378	ERJ3GEYJ332V	Carbon	3.3K ohms 1/16W
R379	ERJ3GEYJ472V	Carbon	4.7K ohms 1/16W
R380	ERJ3GEYJ562V	Carbon	5.6K ohms 1/16W
R381	ERJ3GEYJ153V	Carbon	15K ohms 1/16W
R382	ERJ3GEYJ680V	Carbon	68 ohms 1/16W
R383	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R384	ERJ3GEYJ682V	Carbon	6.8K ohms 1/16W
R385	ERJ3RHD102V	Metal	1K ohms 1/16W
R386	ERJ3GEYJ472V	Carbon	4.7K ohms 1/16W
R387	ERJ3GEY0R00	Carbon	0 ohm 1/16W
R388	ERJ3GEYJ152V	Carbon	1.5K ohms 1/16W
R389	ERJ3GEYJ560V	Carbon	56 ohms 1/16W
R390	ERJ3RHD471V	Metal	470 ohms 1/16W
R391	ERJ3GEYJ680V	Carbon	68 ohms 1/16W
R392	ERJ3RHD123V	Metal	12K ohms 1/16W
R393	ERJ3GEYJ102V	Carbon	1K ohms 1/16W
R394	ERJ3GEYJ332V	Carbon	3.3K ohms 1/16W

REF. NO.	PART NO.	DESCRIPTION	
R395	ERJ3GEYJ102V	Carbon	1K ohms 1/16W
R396	ERJ3GEYJ2R2V	Carbon	2.2 ohms 1/16W
R397	ERJ3GEYJ560V	Carbon	56 ohms 1/16W
R398	ERJ3RHD682V	Metal	6.8K ohms 1/16W
R399	ERJ3GEYJ2R2V	Carbon	2.2 ohms 1/16W
R400,401	ERJ3GEYJ222V	Carbon	2.2K ohms 1/16W
R402	ERJ3GEYJ392V	Carbon	3.9K ohms 1/16W
R403	ERJ3GEYJ473V	Carbon	47K ohms 1/16W
R404	ERJ14YJ750H	Carbon	75 ohms 1/4W
R405	ERJ3RHD103V	Metal	10K ohms 1/16W
R406	ERJ3RHD241V	Metal	240 ohms 1/16W
R407	ERJ3RHD202V	Metal	2K ohms 1/16W
R408	ERJ3GEYJ225V	Carbon	2.2M ohms 1/16W
R409	ERJ3GEYJ822V	Carbon	8.2K ohms 1/16W
R410	ERJ3GEYJ102V	Carbon	1K ohms 1/16W
R411,412	ERJ3GEYJ560V	Carbon	56 ohms 1/16W
R413	ERJ3GEYJ682V	Carbon	6.8K ohms 1/16W
R414	ERJ3GEYJ222V	Carbon	2.2K ohms 1/16W
R415	ERJ6GEY0R00	Carbon	0 ohm 1/10W
C2	MCUV1E104ZFV	Ceramic	0.1 µF
C3	F1H1H103A013	Ceramic	0.01 µF
C5	F1H1H103A013	Ceramic	0.01 µF
C6	MCUV1E104ZFV	Ceramic	0.1 µF
C7	MCUV1E104ZFV	Ceramic	0.1 µF
C8	F1H1H103A013	Ceramic	0.01 µF
C10-12	F1H1H222A013	Ceramic	2200 pF
C13	F1H1H6R0A243	Ceramic	6 pF
C16	MCUV1E104ZFV	Ceramic	0.1 µF
C17,18	MCUV1E104ZFV	Ceramic	0.1 µF
C23	MCUV1E104ZFV	Ceramic	0.1 µF
C24	YWSK41C106MB	Tantalum	10 µF 16V
C26-29	MCUV1H102KBV	Ceramic	1000 pF
C31-34	NFM41R11C222	Ceramic	2200 pF
C301-303	F1H1H101A004	Ceramic	100 pF
C304	MCUV1E104ZFV	Ceramic	0.1 µF
C320,321	MCUV1E104ZFV	Ceramic	0.1 µF
C323	MCUV1E104ZFV	Ceramic	0.1 µF
C326	ECST1CV476R	Tantalum	47 µF 16V
C327,328	MCUV1E104ZFV	Ceramic	0.1 µF
C329	ECST1CV476R	Tantalum	47 µF 16V
C330,331	MCUV1E104ZFV	Ceramic	0.1 µF
C332	ECST1CV476R	Tantalum	47 µF 16V
C333,334	MCUV1E104ZFV	Ceramic	0.1 µF
C335	F1K1H104A024	Ceramic	0.1 µF
C336	MCUV1E104ZFV	Ceramic	0.1 µF
C337,338	F1H1H103A013	Ceramic	0.01 µF
C339	F1H0J105A001	Ceramic	1 µF
C340	F1H1H101A004	Ceramic	100 pF
C341	MCUV1E104ZFV	Ceramic	0.1 µF
C342,343	F1H0J105A001	Ceramic	1 µF
C344	YWK216A1R0R	Electrolytic	1 µF 16V
C345	F1H1C104A001	Ceramic	0.1 µF
C346	F1H1H221A004	Ceramic	220 pF
C347,348	MCUV1E104ZFV	Ceramic	0.1 µF
C350	F1H1H390A004	Ceramic	39 pF

REF. NO.	PART NO.	DESCRIPTION	
C351	F1H1H221A004	Ceramic	220 pF
C353	MCUV1E104ZFV	Ceramic	0.1 µF
C354	F1H1C104A001	Ceramic	0.1 µF
C355	F1H1H101A004	Ceramic	100 pF
C356,357	F1H1C104A001	Ceramic	0.1 µF
C358	F3H1A4770001	Tantalum	470 µF 10V
C359	YWSK41C106MB	Tantalum	10 µF 16V
C360	YWSK41A476MC	Tantalum	47 µF 10V
C361	F3H0J4760002	Tantalum	47 µF 6.3V
C362	YWSK41A476MC	Tantalum	47 µF 10V
C365	ECST1AY475R	Tantalum	4.7 µF 10V
C366	ECST1CC336R	Tantalum	33 µF 16V
C367,368	F1H1C104A001	Ceramic	0.1 µF
C370	F1H1H472A022	Ceramic	4700 pF
L301,302	ELJFC8R2MF	Coil	8.2 µH
CF1,2	YWNL4532S3R6	LC Filter	
CN1	YW533981390	13-pin Connector	
CN2	YW533981290	12-pin Connector	
CN3	K1KA05B00068	5-pin Connector	
CN4	K1KA07B00040	7-pin Connector	

POWER BOARD

PCB2 (RTL)	VCS84EKY2A	Printed Circuit Board Assy for WV-CS854E	
	VCS85GKY2A	Printed Circuit Board Assy for WV-CS850	
IC1	MIP0125SY	IC for WV-CS854E	
	MIP0224SY	IC for WV-CS850	
IC2	YWTA76431S	IC	
IC3	YWUPC2405AHF	IC	
Q3	B1ABCF000054	Transistor for WV-CS850	
Q4,5 ⚠	YWPC817X7	Photocoupler for WV-CS854E	
	YWPC123FY2	Photocoupler for WV-CS850	
D1	YWERC84009	Diode for WV-CS854E	
	B0EDKH000001	Diode for WV-CS850	
D2	YWP6KE180A	Diode	
D3	YWERB3710	Diode	
D4	YWSC2012	Diode	
D5	YWERC84009	Diode for WV-CS854E	
D9	B0ADCJ000008	Diode for WV-CS854E	
D21	YWSF10SC9	Diode	
D22	YWSC80209R	Diode	
VS1	ERZV07D680	ZNR for WV-CS854E	
⚠	J07N471KP	ZNR for WV-CS850	
VS3 ⚠	YWJ07N471KP	ZNR for WV-CS854E	
R3	ERG2SJ181U	Metal for WV-CS854E	180 ohms 2W
	ERG3SJ181U	Metal for WV-CS850	180 ohms
R4	ERJ6GEYJ220V	Carbon	22 ohms 1/10W

REF. NO.	PART NO.	DESCRIPTION	
R5,6	YF2116470JT	Carbon	47 ohms 1/10W
R7	ERJ6GEYJ4R7V	Carbon	4.7 ohms 1/10W
R8,9	ERJ14YJ112H	Carbon for WV-CS854E	1.1K ohms 1/4W
	ERJ14YJ683H	Carbon for WV-CS850	68K ohms 1/4W
R10	ERJ14YJ683H	Carbon for WV-CS850	68K ohms 1/4W
R11	ERJ6GEYJ362V	Carbon for WV-CS850	3.6K ohms 1/10W
R12,13	ERJ6GEYJ470V	Carbon for WV-CS850	47 ohms 1/10W
R17	ERJ6GEYJ821	Carbon for WV-CS854E	820 ohms 1/10W
	ERJ6GEYJ472V	Carbon for WV-CS850	4.7K ohms 1/10W
R23	ERJ6GEYJ103V	Carbon	10K ohms 1/10W
R24	ERJ6GEYJ331V	Carbon	330 ohms 1/10W
R25	ERJ6GEYJ102V	Carbon	1K ohms 1/10W
R26	ERJ6GEYJ332V	Carbon	3.3K ohms 1/10W
R27	ERA6YED243V	Carbon	24K ohms 1/10W
R28	ERA6YED682V	Metal	6.8K ohms 1/10W
R30	YF2116202JT	Carbon	2K ohms 1/10W
R31	ERJ14YJ331	Carbon	330 ohms 1/4W
C1	ECQV1334JM	Plastic for WV-CS854E	0.33 µF
⚠	ECQU2A563MV	Plastic for WV-CS850	0.056 µF
C2,3	ECQM1103KZ	Plastic for WV-CS854E	0.01 µF
⚠	ECKDNA152ME	Ceramic for WV-CS850	1500 pF
C4	ECQV1104JM	Plastic for WV-CS854E	0.1 µF
C5	ECA1HHG102	Electrolytic for WV-CS854E	1000 µF 50V
	ECQU2A333MV	Plastic for WV-CS850	0.033 µF
C6	ECA1HHG102	Electrolytic for WV-CS854E	1000 µF 50V
	EC0S2GA680CB	Electrolytic for WV-CS850	68 µF 400V
C8	MCUV1E104KBN	Ceramic	0.1 µF
C9	EEUEB1A101	Electrolytic	100 µF 10V
C10	F1J1C105A004	Ceramic	1 µF
C11	ECKD3D101KBP	Ceramic	100 pF
C13	F1J1C105A004	Ceramic for WV-CS854E	1 µF
	F1J1E104A039	Ceramic for WV-CS850	0.1 µF
C15,16	ECA1HHG102	Electrolytic for WV-CS854E	1000 µF 50V
C19	ECQM1103KZ	Plastic for WV-CS854E	0.01 µF
⚠	ECKDNA152ME	Ceramic for WV-CS850	1500 pF

REF. NO.	PART NO.	DESCRIPTION	
C21	MCUV1E104KBN	Ceramic for WV-CS854E	0.1 µF
	F1J1H473A403	Ceramic for WV-CS850	0.047 µF
C22	EEUFC1C152	Electrolytic	1500 µF 16V
C23,25	EEUFC1C331	Electrolytic	330 µF 16V
C26	EEUFC1A221E	Electrolytic	220 µF 10V
C27	MCUV1E104KBN	Ceramic	0.1 µF
C28	EEUFC1C471LE	Electrolytic	470 µF 16V
C29	ECUV1H103KBN	Ceramic	0.01 µF
C30	ECKDHT681KB	Ceramic	680 pF
L1	J0KA00000030	LC Filter for WV-CS854E	
	0R3A333F20	LC Filter for WV-CS850	
L2	0R3A333F20	LC Filter for WV-CS850	
L21	G0A220G00010	Coil	22 µH
L24	J0JKB0000004	Coil	2.62 µH
L30	G0A2R0H00001	Coil for WV-CS854E	2 µH
T1 ⚠	G4D2A0000022	High Freq. Transformer for WV-CS854E	
	G4D2A0000024	High Freq. Transformer for WV-CS850	
F1 ⚠	XBA2C40ET0A	Current Fuse for WV-CS854E	4A
	XBA2C20ET0A	Current Fuse for WV-CS850	2A
E2,3 ⚠	K3GE1BB00004	Fuse Holder	
E4	CS850J2	Internal Wire for Communication Board CN3	
E5-7	YWM1866A	Terminal	
E9 ⚠	YW840522	Fuse Cover for WV-CS850	
E10 ⚠	YW851040	Capacitor Cover for WV-CS850	
M60 ⚠	B1ZZZ0000010	Insulator Cap	
M61	V7DA1125A3	Heat Sink	
M62	V4JA1128A4	Spring	
M63 ⚠	V5EA2403A4	Insulation Cover for WV-CS850	

MAIN BOARD

PCB3 (RTL)	VCS85GKB1A	Printed Circuit Board Assy
IC2-4	YWNC7SZ04	IC
IC100	YWTC9074FL	IC
IC101,102	YWLB1838M	IC
IC103	C0ABBA000063	IC
IC104	AN8005M	IC
IC105	YWLM50BIM3	IC
IC106	YWBR9020FE1	IC
IC107	YWTC7SH02FUL	IC
IC108	MN13821-YP	IC
IC109	TMP93PS40DF	IC
IC110	YWMB88346BEF	IC
IC111	B1DZCD000001	IC
IC112	YWNJM2902VT1	IC
IC113	YWLB1838M	IC

REF. NO.	PART NO.	DESCRIPTION
IC114	C0JBAZ000279	IC
IC302	MN67354	IC
IC303	C0JBAE000140	IC
IC305	H1C5675B0001	Oscillator
IC306	YWTC7SU04FUL	IC
IC308	YWTC7S08FUL	IC
IC309	MN102HF55GHL	IC
IC310	AN9DE01F	IC
IC311	C0CBADE00006	IC
IC312	MN13821-JP	IC
IC313	MN13821-DP	IC
IC314	C0JBAE000098	IC
IC315	H1C1775B0001	Oscillator
IC318	YWTC7W14FUL	IC
IC319	YWTC7S04FUL	IC
IC320	C0CBABE00001	IC
IC601	AN2191FHQ	IC
IC603,604	C3EAJA000001	IC
IC605	YWTC7S08FUL	IC
IC606	C0JBAF000161	IC
IC607	YWD6462GS905	IC
IC608	YWTDA8766GCS	IC
IC609,610	MN3112SA-E1	IC
IC611	C3FBKD000049	IC
IC612	YWTC7S04FUL	IC
IC613	C0JBAF000278	IC
IC614	C0ABBA000025	IC
Q1	B1BBAB000016	Transistor
Q100	B1GBGFJJ0001	Transistor
Q301	B1CBCE000002	FET
Q304	B1CBCE000002	FET
Q307,308	B1ADCF000040	Transistor
Q309	UMZ1TL	Transistor
Q601	2SD18200WL	Transistor
Q602	2SB12190WL	Transistor
Q604	B1ADCF000040	Transistor
Q605	UMZ1TL	Transistor
Q606	B1ABCF000060	Transistor
Q607	2SB1218QRSTX	Transistor
Q608	B1ABCF000060	Transistor
Q610	B1ADCF000040	Transistor
D106	MA2Q73800L	Diode
D301	YWHVU359TRF	Diode
D302	YWHVU359TRF	Diode
D303	B0ACCJ000014	Diode
D304,305	YWHVU359TRF	Diode
D306	MA2Z72900L	Diode
D601	MAZ81500ML	Diode
D602	MAZ80820ML	Diode
D605	MA3Z79300L	Diode
D606	YWDA227TL	Diode
D607	MA2Z72800L	Diode
D610,611	MA3Z79300L	Diode
VS901	B4ABB0000001	Semiconductor
R1	ERJ6GEYJ392V	Carbon 3.9K ohms 1/16W

REF. NO.	PART NO.	DESCRIPTION
R2	ERJ3GEYJ105V	Carbon 1M ohms 1/16W
R4	ERJ3GEYJ100V	Carbon 10 ohms 1/16W
R5	ERJ3GEY0R00V	Carbon 0 ohm 1/16W
R6	ERJ3GEYJ100V	Carbon 10 ohms 1/16W
R9	ERJ3GEYJ133V	Carbon 13K ohms 1/16W
R11,12	ERJ3GEYJ100V	Carbon 10 ohms 1/16W
R13	ERJ3GEY0R00V	Carbon 0 ohm 1/16W
R15	YWR0816Q560D	Metal 56 ohms 1/16W
R16	ERJ3GEY0R00V	Carbon 0 ohm 1/16W
R18	ERJ3GEYJ105V	Carbon 1M ohms 1/16W
R19	ERJ3GEYJ754	Carbon 750K ohms 1/16W
R20	ERJ3GEYJ105V	Carbon 1M ohms 1/16W
R21	ERJ3GEYJ754	Carbon 750K ohms 1/16W
R22	ERJ3GEYJ334V	Carbon 330K 1/16W
R23	ERJ3GEYJ105V	Carbon 1M ohms 1/16W
R24	ERJ3GEY0R00V	Carbon 0 ohm 1/16W
R105	ERJ3GEYJ620V	Carbon 62 ohms 1/16W
R106-108	ERJ3GEYJ472V	Carbon 4.7K ohms 1/16W
R109,110	ERJ3GEYJ333V	Carbon 33K ohms 1/16W
R111	ERJ3GEYJ105V	Carbon 1M ohms 1/16W
R112,113	ERJ3GEYJ563V	Carbon 56K ohms 1/16W
R114	ERJ3GEYJ514	Carbon 510K ohms 1/16W
R115	ERJ3GEYJ102V	Carbon 1K ohms 1/16W
R116	ERJ3GEYJ103V	Carbon 10K ohms 1/16W
R119,121	ERJ3GEYJ472V	Carbon 4.7K ohms 1/16W
R122	ERJ3GEYJ101V	Carbon 100 ohms 1/16W
R123	ERJ3GEYJ472V	Carbon 4.7K ohms 1/16W
R125	ERJ3GEYJ101V	Carbon 100 ohms 1/16W
R127	ERJ3GEYJ103V	Carbon 10K ohms 1/16W
R130	ERJ3GEYJ241	Carbon 240 ohms 1/16W
R132	ERJ3GEYJ203V	Carbon 20K ohms 1/16W
R133	ERJ3GEY0R00V	Carbon 0 ohm 1/16W
R134-136	ERJ3GEYJ101V	Carbon 100 ohms 1/16W
R137	ERJ3GEYJ103V	Carbon 10K ohms 1/16W
R138	ERJ3GEYJ104V	Carbon 100K ohms 1/16W
R139	ERJ3GEYJ101V	Carbon 100 ohms 1/16W
R141	ERJ3GEYJ273V	Carbon 27K ohms 1/16W
R142	ERJ3GEYJ472V	Carbon 4.7K ohms 1/16W
R145	ERJ3GEYJ273V	Carbon 27K ohms 1/16W
R146	ERJ3GEY0R00V	Carbon 0 ohm 1/16W
R147	ERJ3GEYJ102V	Carbon 1K ohms 1/16W
R148	ERJ3GEY0R00V	Carbon 0 ohm 1/16W
R149	ERJ3GEYJ105V	Carbon 1M ohms 1/16W
R150	ERJ3GEYJ221V	Carbon 220 ohms 1/16W
R151,152	ERJ3GEYJ101V	Carbon 100 ohms 1/16W
R153,154	ERJ8GEY0R00V	Carbon 0 ohm 1/16W
R159	ERJ6GEY0R00V	Carbon 0 ohm 1/16W
R163	ERJ3GEYJ103V	Carbon 10K ohms 1/16W
R164	ERJ8GEY0R00V	Carbon 0 ohm 1/16W
R165	ERJ3GEY0R00V	Carbon 0 ohm 1/16W
R166-170	ERJ3GEYJ102V	Carbon 1K ohms 1/16W
R171	ERJ3GEYJ103V	Carbon 10K ohms 1/16W
R172	ERJ3GEYJ203V	Carbon 20K ohms 1/16W
R173-175	ERJ3GEYJ103V	Carbon 10K ohms 1/16W
R176	ERJ3GEYJ104V	Carbon 100K ohms 1/16W

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
R177	ERJ3GEYJ682V	Carbon	6.8K ohms 1/16W	R395	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R178,179	ERJ3GEYJ103V	Carbon	10K ohms 1/16W	R398	ERJ3GEYJ202V	Carbon	2K ohms 1/16W
R180	ERJ3GEYJ562V	Carbon	5.6K ohms 1/16W	R400	ERJ3GEYJ102V	Carbon	1K ohms 1/16W
R181	ERJ3GEYJ682V	Carbon	6.8K ohms 1/16W	R401	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R182,183	ERJ3GEYJ103V	Carbon	10K ohms 1/16W	R402	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R184	ERJ3GEYJ562V	Carbon	5.6K ohms 1/16W	R406,407	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R185	YWR0816P202D	Metal	2K ohms 1/16W	R410	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R186	YWR0816P103D	Metal	10K ohms 1/16W	R411	ERJ3GEYJ303V	Carbon	30K ohms 1/16W
R187	ERJ3GEYJ101V	Carbon	100 ohms 1/16W	R412	ERJ3GEYJ102V	Carbon	1K ohms 1/16W
R188	ERJ3GEYJ822V	Carbon	8.2K ohms 1/16W	R415	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R189,190	ERJ3GEYJ472V	Carbon	4.7K ohms 1/16W	R416	ERJ3GEYJ201V	Carbon	200 ohms 1/16W
R191	ERJ3GEYJ103V	Carbon	10K ohms 1/16W	R417	ERJ3GEYJ750V	Carbon	75 ohms 1/16W
R201,203	ERJ6GEY0R00V	Carbon	0 ohm 1/16W	R418	ERJ3GEYJ105V	Carbon	1M ohms 1/16W
R204	ERJ6GEY0R00V	Carbon	0 ohm 1/16W	R420	ERJ3GEYJ201V	Carbon	200 ohms 1/16W
R205	ERJ8GEY0R00V	Carbon	0 ohm 1/16W	R421 423	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R206	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	R424,425	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R207,208	ERJ8GEY0R00V	Carbon	0 ohm 1/16W	R431	ERJ3GEYJ242V	Carbon	2.4K ohms 1/16W
R209	ERJ6GEY0R00V	Carbon	0 ohm 1/16W	R434	ERJ3GEYJ102V	Carbon	1K ohms 1/16W
R210	ERJ3GEYJ752V	Carbon	7.5K ohms 1/16W	R435	ERJ3GEYJ272V	Carbon	2.7K ohms 1/16W
R222,223	ERJ3GEYJ822V	Carbon	8.2K ohms 1/16W	R439	ERJ3GEYJ105V	Carbon	1M ohms 1/16W
R301	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	R443	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R302,304	ERJ3GEYJ103V	Carbon	10K ohms 1/16W	R447	ERJ3GEYJ242V	Carbon	2.4K ohms 1/16W
R305	ERJ3GEYJ102V	Carbon	1K ohms 1/16W	R449	ERJ3GEYJ752V	Carbon	7.5K ohms 1/16W
R307	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	R450-452	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R308	ERJ3GEYJ622V	Carbon	6.2K ohms 1/16W	R453	ERJ3GEYJ473V	Carbon	47K ohms 1/16W
R309	ERJ3GEYJ100V	Carbon	10 ohms 1/16W	R454	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R310	ERJ3GEYJ361V	Carbon	360 ohms 1/16W	R455	ERJ3GEYJ102V	Carbon	1K ohms 1/16W
R314	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	R456,457	ERJ3GEYJ473V	Carbon	47K ohms 1/16W
R316-318	ERJ3GEYJ100V	Carbon	10 ohms 1/16W	R460	ERJ3GEYJ222V	Carbon	2.2K ohms 1/16W
R319,320	ERJ3GEYJ750V	Carbon	75 ohms 1/16W	R462	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R326	YWR0816P271D	Metal	270 ohms 1/16W	R463	ERJ3GEYJ561V	Carbon	560 ohms 1/16W
R329-333	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	R464	ERJ3GEYJ203V	Carbon	20K ohms 1/16W
R335	YWR0816P431D	Metal	430 ohms 1/16W	R465,466	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R336	YWR0816P471D	Carbon	470 ohm 1/16W	R469	ERJ3GEYJ474V	Carbon	470K ohms 1/16W
R337	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	R470	ERJ3GEYJ223V	Carbon	22K ohms 1/16W
R344	YWR0816P151D	Metal	150 ohms 1/16W	R472	ERJ3GEYJ473V	Carbon	47K ohms 1/16W
R346	ERJ3GEYJ242V	Carbon	2.4K ohms 1/16W	R473	ERJ3GEYJ751V	Carbon	750 ohms 1/16W
R347	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	R474	ERJ3GEYJ560V	Carbon	56 ohms 1/16W
R348	ERJ3GEYJ113V	Carbon	11K ohms 1/16W	R476	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R357	ERJ3GEYJ183V	Carbon	18K ohms 1/16W	R477	ERJ3GEYJ222V	Carbon	2.2K ohms 1/16W
R360	ERJ3GEYJ512V	Carbon	5.1K ohms 1/16W	R478	ERJ3GEYJ102V	Carbon	1K ohms 1/16W
R363,366	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	R479	ERJ3GEYJ222V	Carbon	2.2K ohms 1/16W
R367,371	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	R480	ERJ3GEYJ162V	Carbon	1.6K ohms 1/16W
R372	ERJ3GEYJ752V	Carbon	7.5K ohms 1/16W	R481	ERJ3GEYJ362V	Carbon	3.6K ohms 1/16W
R373	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	R482	ERJ3GEYJ222V	Carbon	2.2K ohms 1/16W
R374	ERJ3GEYJ134V	Carbon	130K ohms 1/16W	R483	ERJ3GEYJ562V	Carbon	5.6K ohms 1/16W
R375	ERJ3GEYJ514	Carbon	510K ohms 1/16W	R484	ERJ3GEYJ154V	Carbon	150K ohms 1/16W
R379	ERJ3GEYJ474V	Carbon	470K ohms 1/16W	R485	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R380	ERJ3GEYJ101V	Carbon	100 ohms 1/16W	R486	ERJ3GEYJ513V	Carbon	51K ohms 1/16W
R381	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	R487	ERJ3GEYJ102V	Carbon	1K ohms 1/16W
R382	ERJ14YJ750H	Carbon	75 ohms 1/4W	R488	ERJ3GEYJ164V	Carbon	160K ohms 1/16W
R383	ERJ3GEYJ102V	Carbon	1K ohms 1/16W	R489,490	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R384	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	R492	L311F202J402	Thermistor	
R390	ERJ3GEYJ752V	Carbon	7.5K ohms 1/16W	R493	YWR0816P103D	Metal	10K ohms 1/16W
R394	ERJ3GEYJ302V	Carbon	3K ohms 1/16W	R494	YWR0816P202D	Metal	2K ohms 1/16W

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
R495	YWR0016P021D	Metal	020 ohms 1/16W	R693	ERJ3GEYJ152V	Carbon	1.5K ohms 1/16W
R496	YWR0816P102D	Metal	1K ohms 1/16W	R694	ERJ3GEYJ751V	Carbon	750 ohms 1/16W
R498	ERJ3GEYJ332V	Carbon	3.3K ohms 1/16W	R695	ERJ3GEYJ102V	Carbon	1K ohms 1/16W
R499	ERJ14YJ750H	Carbon	75 ohms 1/4W	R696	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R500,502	ERJ3GEYJ105V	Carbon	1M ohms 1/16W	R697	ERJ3GEYJ751V	Carbon	750 ohms 1/16W
R503	ERJ3GEYJ105V	Carbon	1M ohms 1/16W	R698	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R504	ERJ3GEYJ101V	Carbon	100 ohms 1/16W	R699	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R505	ERJ3GEYJ304V	Carbon	300K ohms 1/16W	R700	ERJ3GEYJ152V	Carbon	1.5K ohms 1/16W
R506	ERJ3GEYJ103V	Carbon	10K ohms 1/16W	R701	ERJ3GEYJ102V	Carbon	1K ohms 1/16W
R508	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	R702,703	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R509,510	ERJ3GEYJ105V	Carbon	1M ohms 1/16W	R705,901	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R511,601	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	R903	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R602	ERJ3GEYJ221V	Carbon	220 ohms 1/16W	R905	ERJ3GEYJ562V	Carbon	5.6K ohms 1/16W
R604,606	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	Z101,102	EXBV8V101JV	Block Resistor	
R607,610	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	Z103,104	EXBV8V822JV	Block Resistor	
R611	ERJ3GEYJ123V	Carbon	12K ohms 1/16W	Z301,302	EXBV8VR000V	Block Resistor	
R612	ERJ3GEYJ183V	Carbon	18K ohms 1/16W	Z601-610	EXBV8VR000V	Block Resistor	
R613	ERJ3GEYJ101V	Carbon	100 ohms 1/16W	C2	F1H1E2230006	Ceramic	0.022 µF
R614	ERJ3GEYJ512V	Carbon	5.1K ohms 1/16W	C4	F1H1H473A008	Ceramic	0.047 µF
R615	ERJ3GEYJ102V	Carbon	1K ohms 1/16W	C5	MCUV1E104ZFV	Ceramic	0.1 µF
R620	ERJ3GEYJ105V	Carbon	1M ohm 1/16W	C6,8	F1H1H103A013	Ceramic	0.01 µF
R622,623	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	C10	F1H1H103A013	Ceramic	0.01 µF
R627,629	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	C11	MCUV1E104ZFV	Ceramic	0.1 µF
R631	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	C14	YWSK41C336MC	Tantalum	33 µF 16V
R632	ERJ3GEYJ474V	Carbon	470K ohms 1/16W	C15	ECST1CY475R	Tantalum	4.7 µF 16V
R634	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	C100,101	MCUV1E104ZFV	Ceramic	0.1 µF
R638	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	C103	MCUV1E104ZFV	Ceramic	0.1 µF
R640	ERJ3GEYJ104V	Carbon	100K ohms 1/16W	C104	F1H1H103A008	Ceramic	0.01 µF
R642	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	C116-119	MCUV1E104ZFV	Ceramic	0.1 µF
R643	ERJ3GEYJ102V	Carbon	1K ohms 1/16W	C120	F1H1H103A013	Ceramic	0.01 µF
R645	ERJ3GEYJ102V	Carbon	1K ohms 1/16W	C121	MCUV1E104ZFV	Ceramic	0.1 µF
R646	ERJ3GEYJ562V	Carbon	5.6K ohms 1/16W	C122	F1H1H103A013	Ceramic	0.01 µF
R648	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	C123-125	MCUV1E104ZFV	Ceramic	0.1 µF
R650	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	C126	F1H1A105A004	Ceramic	1 µF
R651,652	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	C128	MCUV1E104ZFV	Ceramic	0.1 µF
R654,655	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	C129	MCUV1H102KBV	Ceramic	1000 pF
R656	ERJ3GEYJ242V	Carbon	2.4K ohms 1/16W	C130-132	MCUV1E104ZFV	Ceramic	0.1 µF
R657,658	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	C133	ECST1CX106R	Tantalum	10 µF 16V
R659	ERJ3GEYJ242V	Carbon	2.4K ohms 1/16W	C134	ECST1CV476R	Tantalum	47 µF 16V
R660	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	C136,137	ECST1CX156R	Tantalum	15 µF 16V
R661,662	ERJ3GEYJ752V	Carbon	7.5K ohms 1/16W	C138	ECST1CX106R	Tantalum	10 µF 16V
R663,664	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	C142	ECST1CX106R	Tantalum	10 µF 16V
R665	YWR0816P222D	Metal	2.2K ohms 1/16W	C143	ECST1CX106R	Tantalum	10 µF 16V
R666-668	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	C139,140	ECST1AY106R	Tantalum	10 µF 10V
R670	ERJ6GEYJ391V	Carbon	390 ohms 1/10W	C145	MCUV1E104ZFV	Ceramic	0.1 µF
R671	ERJ6GEYJ102V	Carbon	1K ohms 1/10W	C147	MCUV1E104ZFV	Ceramic	0.1 µF
R672	ERJ6GEYJ120	Carbon	12 ohms 1/10W	C148	MCUV1E104ZFV	Ceramic	0.1 µF
R673	ERJ6GEY0R00V	Carbon	0 ohm 1/10W	C146	F1H1H200A650	Ceramic	20 pF
R675-677	ERJ3GEYJ103V	Carbon	10K ohms 1/16W	C204	ECST1CX156R	Tantalum	15 µF 16V
R679	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	C301-304	F1H1H103A013	Ceramic	0.01 µF
R681	ERJ3GEYJ104V	Carbon	100K ohms 1/16W	C307	MCUV1E104ZFV	Ceramic	0.1 µF
R682	ERJ3GEYJ394	Carbon	390K ohms 1/16W	C308	MCUV1H102KBV	Ceramic	1000 pF
R684	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	C309	F1H1H103A013	Ceramic	0.01 µF
R688	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	C311	MCUV1H102KBV	Ceramic	1000 pF
R692	ERJ3GEYJ103V	Carbon	10K ohms 1/16W	C312	F1H1H103A013	Ceramic	0.01 µF

REF. NO.	PART NO.	DESCRIPTION	
C313	F1H1H103A013	Ceramic	0.01 µF
C316	F1H0J105A001	Ceramic	1 µF
C314	MCUV1E104ZFV	Ceramic	0.1 µF
C318	F1H1A105A004	Ceramic	1 µF
C319	MCUV1E104ZFV	Ceramic	0.1 µF
C320	F1H1A474A025	Ceramic	0.47 µF
C321	MCUV1E104ZFV	Ceramic	0.1 µF
C322	F1H1A105A004	Ceramic	1 µF
C323,324	MCUV1E104ZFV	Ceramic	0.1 µF
C325,329	F1H1H101A004	Ceramic	100 pF
C331	MCUV1E104ZFV	Ceramic	0.1 µF
C335	F1H1H103A013	Ceramic	0.01 µF
C337	F1H1H101A004	Ceramic	100 pF
C338	MCUV1E104ZFV	Ceramic	0.1 µF
C339,341	F1H1C104A001	Ceramic	0.1 µF
C340	MCUV1E104ZFV	Ceramic	0.1 µF
C342	F1H1E6830002	Ceramic	0.068 µF
C343	MCUV1E104ZFV	Ceramic	0.1 µF
C344	MCUV1E104ZFV	Ceramic	0.1 µF
C345	F1H1H222A013	Ceramic	2200 pF
C346	F1H1H473A008	Ceramic	0.047 µF
C347	F1H1H471A650	Ceramic	470 pF
C351	YW400225FZT	Ceramic	2.2 µF
C352,354	YWE212F105ZT	Ceramic	10 µF
C357,358	F3H0J1560001	Tantalum	15 µF 6.3V
C359,360	F3F1A1060001	Tantalum	10 µF 10V
C361	ECST1AY225	Tantalum	22 µF 10V
C362,363	F3F1A1060001	Tantalum	10 µF 10V
C364	F1H1A105A004	Ceramic	1 µF
C366	ECST0JY335R	Tantalum	3.3 µ 6.3V
C368	F3F1A1060001	Tantalum	10 µF 10V
C369	F3G1C156A002	Tantalum	15 µF 16V
C370	YWSK41C475MA	Tantalum	4.7 µF16V
C372	YW32Y106F16T	Ceramic	10 µF
C375	EEVHB0J220R	Electrolytic	22 µF 6.3V
C376	EEVHB0J101P	Electrolytic	100 µF 6.3V
C378	MCUV1E104ZFV	Ceramic	0.1 µF
C379,380	F1H1H330A231	Ceramic	33 pF
C381	F1H1H103A013	Ceramic	0.01 µF
C382	MCUV1E104ZFV	Ceramic	0.1 µF
C383	F1H1H103A013	Ceramic	0.01 µF
C384	ECST0JY335R	Tantalum	3.3 µ 6.3V
C385	F1H1H103A013	Ceramic	0.01 µF
C386,387	F1H1A105A004	Ceramic	1 µF
C388	ECST1AY106R	Tantalum	10 µF 10V
C601	F1H1E223A002	Ceramic	0.022 µF
C602	F1H1A105A004	Ceramic	1 µF
C603	F1H1H103A013	Ceramic	0.01 µF
C604	F1H1H150A004	Ceramic	15 pF
C606	F1H1H103A013	Ceramic	0.01 µF
C607-609	MCUV1E104ZFV	Ceramic	0.1 µF
C611-613	MCUV1E104ZFV	Ceramic	0.1 µF
C614	F1K1E105A017	Ceramic	1 µF
C615	MCUV1C105KBM	Ceramic	1 µF
C616	YW400475FZT	Ceramic	4.7 µF

REF. NO.	PART NO.	DESCRIPTION	
C617-621	YWE212F105ZT	Ceramic	10 µF
C622	F3F1A1060001	Tantalum	10 µF 10V
C623	YWE212F105ZT	Ceramic	10 µF
C624	F1H0J105A001	Ceramic	1 µF
C625	F3H0J1560001	Tantalum	15 µF 6.3V
C626,627	MCUV1A105KBN	Ceramic	1 µF
C628,629	F1H1A105A004	Ceramic	1 µF
C630	YW32Y106F16T	Ceramic	10 µF
C631	F3H1E4750002	Tantalum	4.7 µF 25V
C632	F3F1E105A003	Electrolytic	1 µF 25V
C633	F3H1E106A001	Electrolytic	10 µF 25V
C634	F3H1A6860008	Tantalum	68 µF 10V
C636	F3H0J1070006	Tantalum	100 µF 6.3V
C637	F3F1A1060001	Tantalum	10 µF 10V
C638	YW32Y475F25T	Ceramic	4.7 µF
C639	F1H1H103A013	Ceramic	0.01 µF
C640,641	F1H0J105A001	Ceramic	1 µF
C642,643	MCUV1E104ZFV	Ceramic	0.1 µF
C645	YW426225FZT	Ceramic	2.2 µF
C646,648	MCUV1E104ZFV	Ceramic	0.1 µF
C650	MCUV1E104ZFV	Ceramic	0.1 µF
C651	YWE212F105ZT	Ceramic	10 µF
C652	F1H1H103A013	Ceramic	0.01 µF
C901	MCUV1E104ZFV	Ceramic	0.1 µF
L1	ELJSC101KB	Coil	100 µH
L101,103	ELJFC2R2JF	Coil	2.2 µH
L104	ELJFC2R2JF	Coil	2.2 µH
L106	ELJPA180KF	Coil	18 µH
L301	YWBLM21B201T	Coil	200 µH
L302	YW639AN0518	Coil	
L303	ELJFCR68MF	Coil	0.68 µH
L304-306	ELJFC8R2MF	Coil	8.2 µH
L307	ELJFC2R2JF	Coil	2.2 µH
L308	ELJFC100JF	Coil	10 µH
L309-313	ELJFC8R2MF	Coil	8.2 µH
L316,601	ELJSC101KB	Coil	100 µH
L602-605	ELJFC8R2MF	Coil	8.2 µH
L606	ELJFC560KF	Coil	56 µH
X100	PBRC12R288BR	Crystal Oscillator	
X301	H2D160500003	Oscillator	
CF301,302	YWNL4532S4R4	LC Filter	
CF303	YWH50ACB20T	LC Filter	
CF601	YWFSW1497	LC Filter	
CN100	YWAXN320038P	20-pin Connector	
CN101	K1KA04A00108	6-pin Connector	
CN301	AXN330130P	30-pin Connector	
CN603	YWB2BZRSM3TF	2-pin Connector	
E1	YWL3071A08A5	Wire Assy	
TP302-306	YWRCU1608TPV	Test-pin	

Note :
IC1 (CCD Image Sensor) is not supplied as Printed Circuit Board Assy (PCB3).
See Miscellaneous on page 28 for orderring.

REF. NO.	PART NO.	DESCRIPTION	
	SERVO BOARD		
PCB4 (RTL)	VCS85GKC1A	Printed Circuit Board Assy	
IC1	C0CBADD00003	IC	
IC2	C0CBADE00006	IC	
IC3	C0EBB0000016	IC	
IC4	YWTC7SU04FUL	IC	
IC6	MN101D03DMB	IC	
IC7	YWMB88346BEF	IC	
IC8	C0CBADD00003	IC	
IC9	C0ABBA000025	IC	
IC10	C0CBAHC00004	IC	
IC11	NN8278FBP	IC	
IC12	YWMB3775PFV	IC	
IC13	C0ABBA000025	IC	
IC14	NN8278FBP	IC	
IC15	C0GBH0000004	IC	
IC16	YWMB3785APF	IC	
IC17	C0GBH0000004	IC	
IC18	YWNJM2902VT1	IC	
IC19	C0ABBA000063	IC	
IC20	YWNJM2901VT1	IC	
IC21	C0JAAS000027	IC	
IC22	C1AB00000358	IC	
IC23	C0JBAC000158	IC	
IC24	C0CBAAC00019	IC	
Q1,2	2SB0766AHL	Transistor	
Q3	B1ABCF000059	Transistor	
Q6-10	B1ABCF000060	Transistor	
Q11-14	B1ADCF000040	Transistor	
Q17,19	2SB0766AHL	Transistor	
Q20	2SB1218AHL	Transistor	
Q22,23	2SB0766AHL	Transistor	
Q24	B1ABCF000059	Transistor	
D1	B0BA5R000018	Diode	
D2	B0JCMG000003	Diode	
D5	B0JCMG000003	Diode	
D7,8	B0JCMG000003	Diode	
D9,10	YWMA2Z73200L	Diode	
D11	B0BA5R000018	Diode	
D13	YWMA2Z73200L	Diode	
D14	B0JCMG000003	Diode	
D15	B0JCMG000003	Diode	
D16	B0BA5R000018	Diode	
VS1	B4ABB0000001	Semiconductor	
R1,2	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R3	ERJ3RHD822V	Metal	8.2K ohms 1/16W
R5	ERJ3RHD332V	Metal	3.3K ohms 1/16W
R6,8	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R9	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R11	ERJ3GEYJ223V	Carbon	22K ohms 1/16W
R13	ERJ3GEYJ103V	Carbon	10K ohms 1/16W

REF. NO.	PART NO.	DESCRIPTION	
R14,15	ERJ3GEYJ244V	Carbon	240K ohms 1/6W
R16-18	ERJ3GEYJ752V	Carbon	7.5K ohms 1/16W
R19	ERJ3GEYJ244V	Carbon	240K ohms 1/6W
R20,21	ERJ3GEYJ152V	Carbon	1.5K ohms 1/16W
R22	ERJ3GEYJ752V	Carbon	7.5K ohms 1/16W
R23	ERJ3GEYJ244V	Carbon	240K ohms 1/6W
R24-26	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R27	ERJ3GEYJ203V	Carbon	20K ohms 1/16W
R28	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R29	ERJ3GEYJ203V	Carbon	20K ohms 1/16W
R30-33	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R34,35	ERJ3GEYJ682V	Carbon	6.8K ohms 1/16W
R36	ERJ3GEYJ102V	Carbon	1K ohms 1/16W
R37	ERJ3GEYJ101V	Carbon	100 ohms 1/16W
R38	ERJ3GEYJ332V	Carbon	3.3K ohms 1/16W
R39	ERJ3GEYJ101V	Carbon	100 ohms 1/16W
R40,41	ERJ3GEYJ152V	Carbon	1.5K ohms 1/16W
R42	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R44	ERJ3GEYJ682V	Carbon	6.8K ohms 1/16W
R45	ERJ3GEYJ472V	Carbon	4.7K ohms 1/16W
R46	ERJ3GEYJ622V	Carbon	6.2K ohms 1/16W
R47	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R48	ERJ3GEYJ123V	Carbon	12K ohms 1/16W
R49	ERJ3GEYJ101V	Carbon	100 ohms 1/16W
R50	ERJ3GEYJ682V	Carbon	6.8K ohms 1/16W
R51	ERJ3GEYJ272V	Carbon	2.7K ohms 1/16W
R52	ERJ3GEYJ682V	Carbon	6.8K ohms 1/16W
R53	ERJ3GEYJ122V	Carbon	1.2K ohms 1/16W
R54	ERJ3GEYJ471V	Carbon	470 ohms 1/16W
R55	ERJ3GEYJ184V	Carbon	180K ohms 1/16W
R57	ERJ3GEYJ101V	Carbon	100 ohms 1/16W
R58	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R59	ERJ3GEYJ152V	Carbon	1.5K ohms 1/16W
R61	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R62	ERJ3GEYJ201V	Carbon	200 ohms 1/16W
R64	ERJ3GEYJ152V	Carbon	1.5K ohms 1/16W
R65	ERJ3GEYJ333V	Carbon	33K ohms 1/16W
R66	ERJ3GEYJ104V	Carbon	100K ohms 1/16W
R67	ERJ3GEYJ113V	Carbon	11K ohms 1/16W
R68,69	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R70	ERJ3GEYJ123V	Carbon	12K ohms 1/16W
R72	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R73	ERJ3GEYJ471V	Carbon	470 ohms 1/16W
R74	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R75	ERJ3GEYJ203V	Carbon	20K ohms 1/16W
R77	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R78	ERJ3GEYJ203V	Carbon	20K ohms 1/16W
R80	ERJ3GEYJ113V	Carbon	11K ohms 1/16W
R81,82	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R83	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R84	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R85	ERJ3GEYJ184V	Carbon	180K ohms 1/16W
R87	ERJ3GEYJ104V	Carbon	100K ohms 1/16W
R89	ERJ3GEYJ243V	Carbon	24K ohms 1/16WF
R90	ERJ3GEYJ333V	Carbon	33K ohms 1/16W

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
R91	ERJ3GEYJ154V	Carbon	150K ohms 1/16W	R177,178	ERJ3GEYJ102V	Carbon	1K ohms 1/16W
R92	ERJ3GEYJ242V	Carbon	2.4K ohms 1/16W	R180	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R93	ERJ3GEYJ332V	Carbon	3.3K ohms 1/16W	R182	ERJ3GEYJ104V	Carbon	100K ohms 1/16W
R94	ERJ3GEYJ271V	Carbon	270 ohms 1/16W	R185,187	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R95	ERJ3GEYJ223V	Carbon	22K ohms 1/16W	R189-193	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R96,97	ERJ3GEYJ103V	Carbon	10K ohms 1/16W	R195-198	ERJ6GEYJ821	Carbon	820 ohms 1/16W
R98	ERJ3GEYJ154V	Carbon	150K ohms 1/16W	R199-202	ERJ6GEY0R00V	Carbon	0 ohm 1/16W
R101	ERJ3GEYJ393V	Carbon	39K ohms 1/16W	R203,204	ERJ12RQJR56U	Metal	8.2K ohms 1/16W
R103-105	ERJ3GEYJ271V	Carbon	270 ohms 1/16W	R205	ERJ3RHD822V	Metal	8.2K ohms 1/16W
R106	ERJ3GEYJ622V	Carbon	6.2K ohms 1/16W	R206	ERJ3RHD432V	Metal	4.3K ohms 1/16W
R107	ERJ3GEYJ103V	Carbon	10K ohms 1/16W	R207	ERJ3RHD333V	Metal	33K ohms 1/16W
R108	ERJ3GEYJ104V	Carbon	100K ohms 1/16W	R208	ERJ3RHD822V	Metal	8.2K ohms 1/16W
R109,110	ERJ3GEYJ103V	Carbon	10K ohms 1/16W	R209	ERJ3RHD432V	Metal	4.3K ohms 1/16W
R111	ERJ3GEYJ154V	Carbon	150K ohms 1/16W	R210,211	ERJ3RHD472V	Metal	4.7K ohms 1/16W
R112,113	ERJ3GEYJ103V	Carbon	10K ohms 1/16W	R212	ERJ3RHD512V	Metal	5.1K ohms 1/16W
R114	ERJ3GEYJ332V	Carbon	3.3K ohms 1/16W	R213	ERJ3RHD162V	Metal	1.6K ohms1/16W
R115	ERJ3GEYJ103V	Carbon	10K ohms 1/16W	R214,215	ERJ3RHD472V	Metal	4.7K ohms 1/16W
R116	ERJ3GEYJ104V	Carbon	100K ohms 1/16W	R216	ERJ3RHD162V	Metal	1.6K ohms 1/16W
R117	ERJ3GEYJ242V	Carbon	2.4K ohms 1/16W	R217	ERJ3RHD242V	Metal	2.4K ohms 1/16W
R118	ERJ3GEYJ103V	Carbon	10K ohms 1/16W	R220	ERJ3RHD103V	Metal	10K ohms 1/16W
R119	ERJ3GEYJ154V	Carbon	150K ohms 1/16W	R221	ERJ3RHD202V	Metal	2K ohms 1/16W
R120	ERJ3GEYJ223V	Carbon	22K ohms 1/16W	R222	ERJ3RHD272V	Metal	2.7K ohms 1/16W
R122	ERJ3GEYJ103V	Carbon	10K ohms 1/16W	R223	ERJ3RHD102V	Metal	1K ohms 1/16W
R123	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	R224	ERJ3RHD822V	Metal	8.2K ohms 1/16W
R124	ERJ3GEYJ682V	Carbon	6.8K ohms 1/16W	R225	ERJ3RHD123V	Metal	12K ohms 1/16W
R125,126	ERJ3GEYJ103V	Carbon	10K ohms 1/16W	R235,236	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R127	ERJ3GEYJ563V	Carbon	56K ohms 1/16W	R239-242	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R130	ERJ3GEYJ223V	Carbon	22K ohms 1/16W	R248	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R131	ERJ3GEYJ563V	Carbon	56K ohms 1/16W	R251	ERJ3GEYJ750V	Carbon	75 ohms 1/16W
R132	ERJ3GEYJ203V	Carbon	20K ohms 1/16W	R252,253	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R133	ERJ3GEYJ562V	Carbon	5.6K ohms 1/16W	R254,255	ERJ3GEYJ562V	Carbon	5.6K ohms 1/16W
R134,140	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	R264	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R143,144	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	R265	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R146-149	ERJ3GEYJ562V	Carbon	5.6K ohms 1/16W	R266,268	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R153	ERJ3RHD102V	Metal	1K ohms 1/16W	R269,270	ERJ3GEYJ103V	Carbon	10K ohms 1/16W
R154-156	ERJ3RHD202V	Metal	2K ohms 1/16W	R271,272	ERJ3GEYJ562V	Carbon	5.6K ohms 1/16W
R157	ERJ3GEYJ103V	Carbon	10K ohms 1/16W	R274	ERJ3GEY0R00V	Carbon	0 ohm 1/16W
R158	ERJ3RHD202V	Metal	2K ohms 1/16W	R275-280	ERJ6GEYJ220V	Carbon	22 ohms 1/10W
R159	ERJ3RHD102V	Metal	1K ohms 1/16W	R400,401	ERJ6GEY0R00V	Carbon	0 ohm 1/10W
R160	ERJ3GEYJ103V	Carbon	10K ohms 1/16W	C1	F1H1H103A013	Ceramic	0.01 µF
R161	ERJ3GEYJ104V	Carbon	100K ohms 1/16W	C3,4	F1H1H103A013	Ceramic	0.01 µF
R162	ERJ3GEYJ103V	Carbon	10K ohms 1/16W	C6,7	MCUV1E104ZFV	Ceramic	0.1 µF
R163	ERJ3RHD393V	Metal	39K ohms 1/16W	C9,10	MCUV1E104ZFV	Ceramic	0.1 µF
R164	ERJ3GEYJ103V	Carbon	10K ohms 1/16W	C11	F1H1H103A013	Ceramic	0.01 µF
R165	ERJ3RHD393V	Metal	39K ohms 1/16W	C12-18	MCUV1E104ZFV	Ceramic	0.1 µF
R166	ERJ3GEYJ183V	Carbon	18K ohms 1/16W	C19	F1H1H680A004	Ceramic	68 pF
R167	ERJ3GEYJ104V	Carbon	100K ohms 1/16W	C20	F1H1H271A004	Ceramic	270 pF
R168	ERJ3RHD103V	Metal	10K ohms 1/16W	C21,22	MCUV1E104ZFV	Ceramic	0.1 µF
R169	ERJ3GEYJ203V	Carbon	20K ohms 1/16W	C23-25	F1H1E1530002	Ceramic	0.015 µF
R170	ERJ3GEYJ104V	Carbon	100K ohms 1/16W	C27	F1H1A105A004	Ceramic	1 µF
R171	ERJ3RHD103V	Metal	10K ohms 1/16W	C28-31	MCUV1E104ZFV	Ceramic	0.1 µF
R172	ERJ3GEYJ103V	Carbon	10K ohms 1/16W	C32	F1H1H331A650	Ceramic	330 pF
R173	ERJ3GEY0R00V	Carbon	0 ohm 1/16W	C33	F1H1H103A013	Ceramic	0.01 µF
R174	ERJ3GEYJ223V	Carbon	22K ohms 1/16W	C34-36	MCUV1E104ZFV	Ceramic	0.1 µF
R175,176	ERJ3GEYJ103V	Carbon	10K ohms 1/16W	C37	F1H1H103A013	Ceramic	0.01 µF

REF. NO.	PART NO.	DESCRIPTION	
C30	F1H1H680A004	Ceramic	68 pF
C39	MCUV1E104ZFV	Ceramic	0.1 µF
C40	F1H1H271A004	Ceramic	270 pF
C41	MCUV1E104ZFV	Ceramic	0.1 µF
C43-45	F1H1E1530002	Ceramic	0.015 µF
C46,47	F1H1H103A013	Ceramic	0.01 µF
C48	F1H1E223A002	Ceramic	0.022 µF
C49	F1H1H103A013	Ceramic	0.01 µF
C50	MCUV1H102KBV	Ceramic	1000 pF
C51	F1H1H103A013	Ceramic	0.01 µF
C52	F1H1E223A002	Ceramic	0.022 µF
C53	F1H1E273A002	Ceramic	0.027 µF
C54	MCUV1H102KBV	Ceramic	1000 pF
C55	MCUV1H102KBV	Ceramic	1000 pF
C56	F1H1E1530002	Ceramic	0.015 µF
C57	F1H1H103A013	Ceramic	0.01 µF
C58-60	MCUV1H102KBV	Ceramic	1000 pF
C61	F1H1H331A650	Ceramic	330 pF
C62,63	MCUV1H102KBV	Ceramic	1000 pF
C64	F1H1H103A013	Ceramic	0.01 µF
C65	F1H1H200A650	Ceramic	20 pF
C66	F1H1H103A013	Ceramic	0.01 µF
C67	F1H1E223A002	Ceramic	0.022 µF
C68	F1H1H103A013	Ceramic	0.01 µF
C69	MCUV1E104ZFV	Ceramic	0.1 µF
C71	F1H1E223A002	Ceramic	0.022 µF
C72	F1H1H103A013	Ceramic	0.01 µF
C73	F1H1E273A002	Ceramic	0.027 µF
C74	F1H1E1530002	Ceramic	0.015 µF
C75	MCUV1E104ZFV	Ceramic	0.1 µF
C84,87	F1H1H103A013	Ceramic	0.01 µF
C88	F1H1H103A013	Ceramic	0.01 µF
C89,90	MCUV1E104ZFV	Ceramic	0.1 µF
C91	MCUV1H102KBV	Ceramic	1000 pF
C92	MCUV1E104ZFV	Ceramic	0.1 µF
C93	MCUV1H102KBV	Ceramic	1000 pF
C94	MCUV1E104ZFV	Ceramic	0.1 µF
C98,99	ECUV1H122JCX	Ceramic	1200 pF
C100	YWSK41A476MC	Tantalum	47 µF 10V
C101-103	EEFCD1C4R7R	Semiconductor	4.7 µF 16V
C105,106	EEFCD0J330R	Semiconductor	33 µF 6.3V
C107	EEFCD1C4R7R	Semiconductor	4.7 µF 16V
C108	EEFCD0J330R	Semiconductor	33 µF 6.3V
C109	EEFCD1C4R7R	Semiconductor	4.7 µF 16V
C111	YWSK41C106MB	Tantalum	10 µF 16V
C113	YWSK41C106MB	Tantalum	10 µF 16V
C114,115	YWSK41C106MB	Tantalum	10 µF 16V
C116	F3H1E226A002	Tantalum	22 µF 25V
C117,118	F3G0J6850002	Tantalum	6.8 µF 6.3V
C120	YWK235A0R1R	Electrolytic	0.1 µF 16V
C121,122	YWSK41C106MB	Tantalum	10 µF 16V
C123	YWK235A0R1R	Electrolytic	0.1 µF 16V
C124	YWK216A1R0R	Electrolytic	1 µF 16V
C125	ECST1CY155R	Tantalum	1.5 µF16V
C126	F3F1A1060001	Tantalum	10 µF 10V

REF. NO.	PART NO.	DESCRIPTION	
C127	ECST1CY155R	Tantalum	1.5 µF16V
C128	YWSK41C106MB	Tantalum	10 µF 16V
C129	MCUV1E683KBN	Ceramic	0.068 µF 25V
C130	YWK216A1R0R	Electrolytic	1 µF 16V
C131	MCUV1E683KBN	Ceramic	0.068 µF 25V
C132	F1H1H103A013	Ceramic	0.01 µF
C133	YWSK41C106MB	Tantalum	10 µF 16V
C134,135	ECST1CY155R	Tantalum	1.5 µF16V
C136	YWSK41C106MB	Tantalum	10 µF 16V
C137	F3H1E226A002	Tantalum	22 µF 25V
C139,140	F1H1H103A013	Ceramic	0.01 µF
C141-143	MCUV1E104ZFV	Ceramic	0.1 µF
C146	F3F1A1060001	Tantalum	10 µF 10V
C147	F1H1C104A001	Ceramic	0.1 µF
C148	F1H1H103A013	Ceramic	0.01 µF
C149-154	RCUV1C474KBM	Ceramic	0.47 µF
L2-4	YWCDR63220MC	Coil	22 µH
L5-9	YWCDRH62B220	Coil	22 µH
L10	ELJFC8R2MF	Coil	8.2 µH
L13	ELJPC100KF	Coil	10 µH
L500	J0JBC0000007	Coil	
X1	H2D160500003	Oscillator	
CF1	EXCCET101U	Filter	
CN3	YWB5BZRSM3TF	5-pin Connector	
CN4	K1KA02B00079	2-pin Connector	
CN5	YW533071891	18-pin Connector	
CN6	K1KB18A00025	18-pin Connector	
CN9	AXN330130P	30-pin Connector	
TP1-6	YWRCU1608TPV	Test-pin	

ACCESSORY PARTS / PACKAGING PARTS

CN101		YWMX5557P04	Connector for 24 V AC for WV-CS854E
E102		CS850MLTA	Wire Assy (Alarm In Cable, Alarm Out Cable)
M71	⚠	V8QA5388AN	Operating Instructions
M72		PE20X35C05B	Polyethylene Bag
M73		PE26X40C05B	Polyethylene Bag
M74		V5EA2432A4	Cover
M75		V9CD4078AN	Packaging Assy for WV-CS854E
		V9CC4078AN	Packaging Assy for WV-CS850
M76		YWV7SA2037A3	Bar Code Label
M77		V9AA2734A2	Decoration Cover

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